UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

JAMES BLEDSOE, et al., individually and on behalf of all others similarly situated, Plaintiffs, vs. **FCA US LLC,** a Delaware corporation, and **CUMMINS INC.,** an Indiana corporation, Defendants.	**4:16-CV-14024-TGB-RSW** **ORDER DENYING MOTION TO STRIKE DECLARATION OF PLAINTIFFS' EXPERT SMITHERS (ECF NO. 203), DENYING MOTION TO STRIKE SMITHERS' AUGUST 16, 2021 REPORT (ECF NO. 192), AND DENYING IN PART AND GRANTING IN PART DEFENDANTS' THREE OTHER *DAUBERT*-RELATED MOTIONS REGARDING PLAINTIFFS' EXPERTS SMITHERS AND STOCKTON (ECF NOS. 194, 199, 219)**

This case is filed as a putative class action by Plaintiffs James Bledsoe, Paul Chouffet, Michael Erben, James Forshaw, Marc Ganz, Matt Langworthy, Jay Martin, Martin Rivas, Dawn Roberts, Alan Strange, Marty Ward, and Martin Witberg ("Plaintiffs") on behalf of a nationwide class of consumers who purchased Dodge Ram 2500 and 3500 diesel trucks ("the Trucks") manufactured and sold by Defendants FCA US LLC ("FCA") and Cummins Inc. ("Cummins") between 2007 and 2012.

Plaintiffs allege that the Trucks they purchased emit nitrogen oxides ("NOx") at levels that exceed federal and state emissions standards as well as the expectations of reasonable consumers. Plaintiffs allege that they purchased their Trucks based on Defendants' advertising that touted the Trucks as more fuel efficient and environmentally friendly than other diesel trucks. Plaintiffs allege that despite marketing the Trucks as having "clean diesel engines," Defendants knew the Trucks discharged emissions at levels greater than what a reasonable consumer would expect based on the alleged representations.

To prove their claims, Plaintiffs seek to offer the opinions of two experts, Juston Smithers ("Smithers") and Edward Stockton ("Stockton"). In simplest terms, Smithers provides technical opinions on the Trucks' components and operations that purportedly increased NOx emissions in real-world settings. Smithers also concludes that Cummins misled federal and state environmental regulators with its emissions calculations to ensure that Defendants' Trucks could obtain the necessary regulatory certifications. Stockton is Plaintiffs' damages expert. Stockton provides two primary damages models—an Overpayment model and an Excess Fuel Consumption model—to quantify the alleged harm to putative class members in purchasing and driving Trucks that emitted higher levels of NOx than advertised and, as a result, consumed more fuel than buyers anticipated.

Defendants have filed five Motions seeking to exclude Smithers and Stockton's opinions. For the reasons that follow, this Court **DENIES** Defendants' Motion to Strike Juston Smithers'[1] Declaration (ECF No. 203). The Court also **DENIES** Defendants' Motion to Strike Smithers' August 16, 2021 Report (ECF No. 192). The Court **DENIES in part** Defendants' three other Motions related to striking the declarations, reports, and opinions of Smithers and Stockton (ECF Nos. 194, 199, 219). But with respect to Smithers and Stockton's opinions as to defeat devices only, the Court **GRANTS in part** Defendants' three Motions related to striking the declarations, reports, and opinions of Smithers and Stockton (ECF Nos. 194, 199, 219), as they relate to defeat devices.

I. BACKGROUND

Plaintiffs seek to bring a nationwide class action, with sub-classes in all 50 states and the District of Columbia, alleging that Defendant FCA's 2007–2012 Dodge Ram 2500 and 3500 diesel trucks (the "Trucks" or "vehicles"), equipped with 6.7-liter Turbo Diesel engines manufactured by Defendant Cummins, emit NOx at levels that exceed federal and state emissions standards as well as the expectations of reasonable consumers.

Plaintiffs allege that they purchased their Trucks based on Defendants advertising the Trucks as more fuel efficient and

[1] Contrary to some style guide sources, the Court modifies the possessive form throughout for ease of reading. *See U.S. Government Publishing Office Style Manual* 193 (2016).

environmentally friendly than other diesel trucks. Plaintiffs allege that Defendants knew the Trucks discharged emissions at levels greater than what a reasonable consumer would expect, but continued to market them as using "clean diesel" technology. In Plaintiffs' operative Third Consolidated and Amended Class Action Complaint ("TCAC"), they allege violations of the Racketeer Influenced and Corrupt Organizations Act ("RICO Act"); the Magnuson Moss Warranty Act ("MMWA"); and consumer protection, breach of contract, and fraudulent concealment laws of 50 states as well as the District of Columbia. ECF No. 255.

Defendants previously moved to dismiss Plaintiffs' Second Consolidated and Amended Class Action Complaint ("SCAC"). ECF Nos. 67, 68. This Court granted Defendants' motions on Plaintiffs' MMWA claim, but denied them for all other claims. ECF No. 97. Later, Defendant FCA moved for judgment on the pleadings as to Plaintiffs Bledsoe, Erben, Forshaw, Witberg, and Chouffet's SCAC. ECF No. 171. This Court granted FCA's motion as to those five Plaintiffs, and with respect to FCA alone. ECF No. 215. Plaintiffs Bledsoe, Erben, Forshaw, Witberg, and Chouffet had been proposed as potential class representatives for state law claims in California, Idaho, South Carolina, Michigan, and Texas. ECF No. 238. Plaintiffs sought leave to amend their complaint to add replacements for these five Plaintiffs to retain viable claims against FCA. *Id*. The Court granted leave for Plaintiffs to do so against FCA only, limited to adding new Plaintiffs advancing the same state law claims and

theories of liability against FCA as those who were dismissed. ECF No. 249.

Plaintiffs then filed their TCAC for that purpose. As it stands now, Plaintiffs, with the potential to serve as class representatives advancing state law claims and theories of liability against Defendants, are residents of the following states: California, Illinois, Michigan, Minnesota, Montana, New Mexico, North Carolina, South Carolina, Tennessee, Texas, and Washington. ECF No. 255.

Plaintiffs' alleged injuries are supported by expert opinions and reports from two experts, Smithers and Stockton. Smithers' opinions address two primary issues: (1) whether the Trucks contain "defeat devices" and/or "excessive emissions devices," causing NOx emissions beyond regulatory standards in common real-world driving conditions; and (2) whether the Trucks' designs cause excessive fuel consumption. Stockton's opinions address two damages models: (1) an Overpayment model, calculating the amount that putative class members overpaid for the Trucks that emit excessive NOx at the point of sale; (2) and an Excess Fuel Consumption model, calculating the increased costs passed along to the consumer through the Trucks' excessive fuel consumption. These two damage models are premised on Plaintiffs' ability to prove the existence of "excessive emissions devices" and/or defeat devices as described by Smithers.

Pending before the Court are five of Defendants' Motions seeking to strike all opinions of both Smithers and Stockton. These Motions have been fully and extensively briefed by all parties. The Motions are:

1. Defendants' Motion to Strike Plaintiffs' Expert Juston Smithers' August 16, 2021 Report and Opinions (ECF No. 192) submitted in support of Plaintiffs' Amended Motion for Class Certification (ECF No. 183);

2. Defendants' Motion to Strike Plaintiffs' Expert Juston Smithers' November 12, 2021 Declaration (ECF No. 203);

3. Defendants' Motion to Strike Plaintiffs' Expert Juston Smithers' December 16, 2021 Merits Report and Opinions (ECF No. 219);

4. Defendants' Motion to Strike and Exclude the August 16, 2021 Declarations and Opinions of Plaintiffs' Expert Edward Stockton (ECF No. 194) submitted in support of Plaintiffs' Amended Motion for Class Certification (ECF No. 183); and

5. Defendants' Motion to Strike and Exclude the December 16, 2021 Merits Report and Opinions of Plaintiffs' Expert Edward Stockton (ECF No. 217).

Having carefully reviewed the briefing submitted by the parties on these motions, this Court finds that a hearing is unnecessary. *See* E.D. Mich. LR 7.1(f)(2). For the reasons set out in detail below, the Court **DENIES** Defendants' Motion to Strike the Declaration of Plaintiffs' Expert Smithers (ECF No. 203), and **DENIES** Defendants' Motion to Strike Plaintiffs' Expert Smithers' August 16, 2021 Report and Opinions (ECF No. 192). The Court **DENIES IN PART and GRANTS IN PART** Defendants' three other *Daubert*-related Motions regarding the opinions

and reports of Plaintiffs' Experts Smithers and Stockton (ECF Nos. 194, 217, 219), for the reasons explained below.

II. LEGAL STANDARD

Federal Rule of Evidence 702 provides that:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

An expert's qualifications are evaluated to ensure that "the facets of the witness' background [] make[] his knowledge 'specialized,' that is, beyond the scope of the ordinary juror," and "relevant to the opinion sought." *Zuzula v. ABB Power T & D Co.*, 267 F. Supp. 2d 703, 713 (E.D. Mich. 2003). The Court must also determine whether the expert's testimony "both rests on a reliable foundation and is relevant to the task at hand." *Newell Rubbermaid, Inc. v. Raymond Corp.*, 676 F.3d 521, 527 (6th Cir. 2012) (citation omitted). Though experts are given wide latitude in offering their opinions, an opinion must have "a reliable basis in the knowledge and experience of the discipline." *Jahn v. Equine Servs., PSC*, 233 F.3d 382, 388 (6th Cir. 2000) (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 592 (1993)). An expert must apply "the same

level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999).

Under *Daubert*, courts assess reliability by determining whether the expert's theory or technique: (1) can be or has been tested; (2) has been subjected to peer review and publication; (3) has a known or potential error rate; and (4) enjoys general acceptance in the relevant scientific community. *Daubert*, 509 U.S. at 579. The touchstone of admissibility under Rule 702 is reliability and relevance, not general acceptance. *Id.* at 599.

The *Daubert* factors "do *not* constitute a 'definitive checklist or test'" and "specific factors neither necessarily nor exclusively appl[y] to all experts or in every case." *Kumho Tire*, 526 U.S. at 142, 150 (quoting *Daubert*, 509 U.S. at 593). "[T]he test of reliability is 'flexible.'" *Id.* at 141. And "the law grants a district court the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination." *Id.* at 142; *see also Surles ex rel. Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 295 (6th Cir. 2007). The crux of the expert witness analysis is "whether a putative expert's testimony would be inadmissible junk science or instead would be testimony falling within the 'range where experts might reasonably differ.'" *Thomas v. Novartis Pharms. Corp.*, 443 F. App'x 58, 60 (6th Cir. 2011) (quoting *Kumho Tire*, 526 U.S. at 153).

To determine the testimony's reliability, the court does not "determine whether [the opinion] is correct, but rather [determines] whether it rests upon a reliable foundation." *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 529–30 (6th Cir. 2008). The trial court only determines the admissibility of expert evidence, while the jury determines its weight. The court's focus is "solely on principles and methodology, not on the conclusions that they generate." *Daubert*, 509 U.S. at 595.

The "rejection of expert testimony is the exception rather than the rule, and the trial court's role as gatekeeper is not intended to serve as a replacement for the adversary system." *Cason-Merenda v. Detroit Med. Ctr.*, No. 06–15601, 2013 WL 1721651, at *5 (E.D. Mich. April 22, 2013) (quoting *In re Nw. Airlines Corp. Antitrust Litig.*, 197 F. Supp. 2d 908, 913 (E.D. Mich. 2002)). Disputes regarding implementing valid methodologies, the appropriateness of an expert's use and interpretation of data, or claims of "weaknesses in the factual basis of an expert witness' opinion . . . bear on the weight of the evidence rather than on its admissibility." *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797, 801 (6th Cir. 2000) (alteration in original) (quoting *United States v. L.E. Cooke Co.*, 991 F.2d 336, 342 (6th Cir. 1993)).

Federal Rule of Evidence 703 governs the bases of an expert's opinion testimony:

> An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those

> kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

Federal Rule of Evidence 703 allows an expert witness to testify to an opinion that is supported by inadmissible hearsay evidence. *United States v. Scott*, 716 F. App'x 477, 485 (6th Cir. 2017). Furthermore, although an expert's opinion is not admissible if it is speculative or mere guesswork, a court should admit expert testimony if it has a reasonable factual basis. *See United States v. Ramer*, 883 F.3d 659, 680 (6th Cir. 2018). In such a circumstance, "any remaining challenges merely go to the weight, as opposed to the admissibility, of the expert testimony." *Id.* (citing *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530).

III. DISCUSSION

A. PLAINTIFFS' EXPERT JUSTON SMITHERS

i. Smithers' qualifications

Smithers is the Chief Technology Officer of 44 Energy Technologies Incorporated, a company he co-founded approximately nine years ago. Smithers August 16, 2021 Report, ECF No. 184-2 (sealed), PageID.21575. He holds a Bachelor of Science degree in Chemical Engineering with an emphasis in environmental technology from the University of California, Berkeley. *Id.* Smithers has been consulted as an expert for diesel

emission control technology companies as well as for legal matters related to emission control and powertrain technologies. *Id.*

Smithers has assisted clients with field testing and dynamometer testing of diesel emission control technologies pursuant to California Air Resources Board ("CARB") Executive Orders and in-use compliance requirements. *Id.* Smithers' work has involved a high degree of interaction with appropriate regulatory agencies including CARB and the U.S. Environmental Protection Agency ("EPA"). *Id.* Smithers also has extensive experience in vehicle testing using portable emission measurement systems ("PEMS") and chassis dynamometers. *Id.*

Smithers has published peer reviewed papers in the *Journal of the American Chemical Society* and the *Journal of Organic Chemistry*. *Id.* He is also a co-inventor of four U.S. patents relating to diesel emission controls and advanced biofuels processing technology. *Id.* Smithers further details his other relevant experience in his CV submitted to the Court as part of his reports. *Id.* at PageID.21661–63.

Defendants do not challenge Smithers' qualifications to provide opinions on the matters addressed in his reports. The Court finds that Smithers is qualified through his education, experience, and training to provide the opinions in his reports. *See Counts v. Gen. Motors, LLC*, No. 1:16-cv-12541, 2022 WL 2078023, at *6–8 (E.D. Mich. June 9, 2022) (qualifying Smithers as expert to opine on similar subject matters, and finding that his testimony would aid the jury in understanding an

otherwise opaque subject). Smithers' August 16, 2021 report was submitted in support of class certification. ECF No. 184-2. That report was later supplemented by his November 12, 2021 declaration. ECF No. 199-5. Smithers then issued a merits report on December 16, 2021. ECF No. 221-10. This opinion will address both of Smithers' reports and his declaration.

ii. Smithers' August 16, 2021 Class Certification Report

In his first report, Smithers explains that EPA and CARB[2] regulate toxic air pollutants for all on-road vehicles sold in the United States, including the 2007 to 2012 Dodge Ram 2500 and 3500 diesel vehicles at issue here. ECF No. 184-2, PageID.21576. To quantify and regulate emissions for harmful pollutants like NOx, vehicle manufacturers are required to test their emissions on a variety of regulatory test cycles using a stationary treadmill called a chassis dynamometer. *Id.* Because it is not possible or practical to anticipate and regulate all possible driving conditions and driving styles, regulators have adopted test cycles that are intended to represent typical real-world conditions. *Id.*

The Ram 2500 and 3500 Trucks share a functionally identical engine and diesel aftertreatment system. *Id.* at PageID.21591. Indeed, the Trucks differ only in the weight class to which they are certified. *Id.* The emission standards in 2007 for Class 2b and Class 3 trucks (the classes applicable to the Ram 2500 and 3500 diesel trucks, respectively),

[2] EPA and CARB are also collectively referred to as "the regulators."

were less stringent than the next set of standards that took effect in 2010. *Id.* Rather than producing an engine to meet the then-current 2007 standards, Defendants sought to certify the new Ram 2500 and 3500 engine under the more challenging 2010 EPA emissions standard, three years ahead of the necessary timeline. *Id.*

Smithers' report explains in detail the basis for his opinion that the Trucks are equipped with what he calls "Excessive Emissions Devices" ("EEDs"). *Id.* at PageID.21577. Smithers uses this term as shorthand for software controls that cause NOx emissions to exceed regulatory test limits. *Id.* Smithers identifies four areas where these EEDs exist on the Trucks: (1) excessive active regeneration; (2) ambient temperature; (3) higher power/load conditions; and (4) cold and hot starts. *Id.* at PageID.21577–78.

To set the context for discussing Defendants' critiques of Smithers' August 16, 2021 report and Plaintiffs' responses, the Court will summarize some key elements of that report.

1. Excessive Active Regeneration as an EED

Smithers' report identifies the excessive active regeneration that takes place in the Trucks as an EED. Smithers explains that all modern diesel vehicles, including the Trucks, are equipped with an emission control device called a diesel particulate filter ("DPF") to control emissions of particulate matter (soot). *Id.* at PageID.21577. These DPFs must undergo a periodic change in engine conditions, called an active

regeneration, to clean and remove the accumulated particulate matter. *Id.*

In addition to consuming significant quantities of fuel, active regenerations cause higher NOx emissions. *Id.* Because these active regeneration events are not captured accurately on a single emissions test cycle, regulators have developed a concept called Upward Adjustment Factors ("UAFs"), to account for the increases in NOx emissions caused by active regeneration. *Id.* In other words, because active regeneration impacts emissions, its effect must be quantified and factored into the regulatory certification of a vehicle's emissions. *Id.* at PageID.21615. Active regeneration is factored into emissions values as an Infrequent Regeneration Adjustment Factor ("IRAF"). *Id.* IRAFs that increase emissions are referred to as UAFs. *Id.* Therefore, regulators require calculating the impact of active regeneration on overall NOx emissions by adding UAFs onto a base NOx measurement for vehicle emissions certification. *Id.*

In practice, the UAF for active regeneration accounts for the fraction of miles traveled while the vehicle is actively regenerating, as well as the magnitude of the NOx emissions during active regeneration. *Id.* The more often a vehicle must actively regenerate, the higher the determined UAF value will become, increasing the overall NOx emissions to an extent that may exceed emissions standards. *Id.* This could then cause a vehicle to fail to achieve certification by the regulators. *Id.*

After extensive testing, Smithers found that for both city and highway driving, the Trucks' actual UAF and the actual impact on NOx emissions in real-world operation are significantly higher than the values reported for the Trucks in Defendants' certification applications to the regulators. *Id.* at PageID.21577. Smithers then opines that the NOx values provided for certification are a gross misrepresentation of real NOx emissions during normal and expected vehicle operation. *Id.* at PageID.21622.

Smithers also opines that this excessive regeneration activity consumes additional fuel, causing an average net decrease in fuel economy of 4.1% and 3.7% for city and highway driving, respectively. *Id.* at PageID.21577, PageID.21622–23. Smithers explains that these results are consistent and repeatable for all five diesel vehicles he tested, meaning the results are representative of all relevant versions of the Trucks. *Id.* at PageID.21577. Smithers finds that the UAF values Defendants submitted for certification purposes do not account for this excessive fuel consumption. *Id.* at PageID.21624. As a result, Smithers opines that consumers would not expect these fuel economy losses, making excess fuel consumption a hidden cost of operating the Trucks. *Id.*

2. Ambient Temperature, Higher Power/Load Conditions, and Start Temperature as Other EEDs

Smithers also details results from his testing to identify ambient temperature, higher power/load conditions, and start temperature as other EEDs. Smithers found that the certification testing for the Trucks was performed at the prescribed temperature window. *Id.* at PageID.21577. But when the Trucks were operated at temperatures outside of that window, the NOx emissions increased. *Id.*

Smithers found that greater power demand on the engine (for example, traveling up road grades or towing a heavy load) causes excessive NOx emissions. *Id.* at PageID.21578. Although the Trucks are designed to tow loads up to 22,000 lbs., certification testing is performed at relatively low weights ranging from 8,500 to 10,500 lbs. *Id.* When the engines are operated at higher loads not encountered on the certification tests, NOx emissions increase significantly. *Id.* Therefore, higher emissions from greater power demands are not captured by regulatory testing. *Id.*

Smithers also explains that emissions are generally higher when a vehicle is started from a completely cold state (a "cold start"). *Id.* The emission control components that reduce NOx emissions function most effectively when the engine is fully warmed. *Id.* On the other hand, starting a vehicle in a partially warmed up state (a "hot start," such as when the engine has been off for 10 minutes and is restarted) can also

result in increased emissions, though to a lesser extent than under cold start conditions. *Id.* In his testing, Smithers found that the test vehicles have cold and hot start emissions at significantly higher levels than the cold and hot start emissions measured on the certification test cycles. *Id.*

Taken in combination, Smithers opines that these various EEDs result in real-world NOx emissions that diverge significantly from the certification application values of the Trucks and the relevant standards, such that those values are not representative of expected real-world emissions. *Id.*

3. Diesel Aftertreatment Configurations

Smithers' report explains that generally, most original equipment manufacturers ("OEMs") use one of two different diesel aftertreatment configurations. *Id.* at PageID.21591. The first configuration places the key aftertreatment components in the following order:

1. Diesel Oxidation Catalyst → 2. Diesel Particulate Filter ("DPF") → 3. NOx Reduction Catalyst (through either Selective Catalytic Reduction ("SCR") or a NOx Adsorber)

Id. This first configuration intentionally positions the DPF where it will be exposed to the highest possible levels of NOx. *Id.* This configuration also provides more favorable conditions of higher temperatures and higher NOx levels to promote passive (as opposed to active) regeneration of the DPF. *Id.* The higher the NOx concentration, the better the DPF

can remove particulate matter without the need for high NOx-emitting and fuel-consuming active regenerations. *Id.* at PageID.21591–92.

Defendants chose a different configuration for the 6.7-liter engine in the Ram 2500 and 3500 Trucks. *Id.* at PageID.21592. For the Trucks, the key components are in the following order:

> **1. Diesel Oxidation Catalyst → 2. NOx Reduction Catalyst (NOx Adsorber) → 3. Diesel Particulate Filter ("DPF")**

Id.

Smithers opines that Defendants designed their emissions control system to place its NOx Reduction Catalyst—specifically in the form of a NOx Adsorber—ahead of the DPF. For emissions testing purposes, Smithers explains that this design has two main benefits. First, for cold start tests, placing the NOx Adsorber before the DPF allows the NOx Adsorber to heat up to the optimal temperature for removing NOx emissions faster. If the DPF is placed "upstream of the NOx adsorber" in the usual design, the DPF "soak[s] up heat during the start of the test[,] thus delaying the time for the NOx catalyst to heat up." *Id.* But the hotter the NOx adsorber is, the more effectively it can treat NOx emissions at the start of the test cycle. *Id.* Second, Defendants' choice to use a NOx Adsorber as its NOx Reduction Catalyst (rather than an SCR) would allow the Trucks to more frequently remove NOx to produce lower NOx emissions under testing conditions. *Id.* at PageID.21593. But overall, Defendants' design requires heavy reliance on an excessively frequent

active regeneration strategy, leading to very high NOx emissions and greater impact on fuel economy in real-world operation. *Id.*

4. Smithers' testing processes and findings

Smithers and his staff selected and purchased six test vehicles: five diesel vehicles to span the entire range of Trucks and one gasoline vehicle as a basis for comparison. *Id.* at PageID.21594. Of the five diesel trucks tested, four were 2500 Ram trucks certified to the federal and California standards, and one was a 3500 Ram truck certified to the federal and California standards. *Id.* Smithers also tested and obtained data from three of Plaintiffs' Trucks. *Id.* at PageID.21625.

Smithers opines that all model year 2007–2012 Trucks are expected to perform similarly because there are no major differences in engine or aftertreatment configuration. *Id.* at PageID.21600. Smithers notes, however, that minor software or hardware changes may be present in the model year groups. *Id.* Based upon Smithers' testing and data analyses, he opines that the resulting emissions from all vehicles are consistent and not dependent on model year, and that the vehicles tested are representative of the Truck models and years for the putative class. *Id.*

Smithers' report is indisputably detailed in describing his testing processes and findings. The report covers a comprehensive range of topics including: engine and emissions control system design and function; active and passive regeneration, and selective catalytic reduction; emissions test cycles; Defendants' emission strategy for the Trucks,

including the revised aftertreatment configuration described above, and an effort to obtain NOx credits for meeting new emissions standards before they went into effect in 2010; an overview of test vehicles, dynamometer, Portable Emissions Measurement System ("PEMS") testing—a "portable laboratory system" that can test chemical emissions during on-road driving—and Plaintiffs' vehicle testing and results; EEDs relating to active regeneration, ambient, low, and high temperatures, road grades and during trailer towing, and cold and hot starts; flat road analysis; NOx adsorber catalyst strategies; UAF comparisons; Auxiliary Emission Control Devices ("AECDs")—design features that regulate emissions-related vehicle systems; and fuel economy impact. The report's findings on testing are also supported by data in numerous appendices, figures, and tables.

Smithers ultimately concludes that NOx emissions from the Ram 2500 and 3500 Trucks diverge significantly from the dynamometer test results and representations made in the applications for certification submitted to the regulators. *Id.* at PageID.21659. In the case of active regeneration, Smithers' finds a complete lack of connection between the Upward Adjustment Factors ("UAFs") for NOx submitted in Cummins' certification materials and the actual UAFs encountered in real-world operation. *Id.* As a result, he opines that real on-road NOx emissions greatly exceed the relevant certification standards. *Id.* Furthermore, the

Trucks' excessive active regeneration has the additional effect of excess fuel consumption. *Id.*

In this August 16, 2021 report, Smithers does not opine that any of the EEDs he describes are "defeat devices" under the Code of Federal Regulations ("CFR"). *Id.* Defeat devices are later explained in Smithers' merits report described below.

iii. Smithers' November 12, 2021 Declaration

Plaintiffs submitted a declaration from Smithers dated November 12, 2021, as part of their Response (ECF No. 199-5) to Defendants' Motion to Strike Smithers' class certification report (ECF No. 192). In this declaration, Smithers responds to Defendants' critiques of his August 16, 2021 report raised in their Motion to Strike and at his deposition.

Smithers generally explains that to produce the results presented in his first report, he relied upon a large quantity of data gathered by testing vehicles over a wide variety of conditions and a large quantity of mileages. Smithers Declaration (Nov. 12, 2021), ECF No. 199-5, PageID.25195. Smithers describes that his testing involved many individual test segments that were aggregated into longer distances and further analyzed. *Id.* at PageID.25195–96. The declaration also compiles this testing data into summary tables.

The declaration further reviews Smithers' discussion of Auxiliary Emission Control Devices ("AECDs") and differences between model years. Federal regulations define AECDs as "any element of design which

senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The EPA requires manufacturers to disclose all AECDs included in the vehicle as part of their emissions certification materials. 40 C.F.R § 86.1844-01.

Smithers explains that while Defendants provided redacted and then unredacted AECD disclosure data, Smithers concluded that the initial redacted AECD disclosures were sufficient for his analyses. Although he later got access to unredacted AECD data, Smithers found that the unredacted data did not help in identifying differences in emissions control system behavior or in emissions control strategy between model years and model types. ECF No. 199-5, PageID.25197–98. The declaration also discusses the PEMS testing results from Smithers' first report, which helped Smithers confirm that the AECDs in each model year are substantially similar. *Id.* at PageID.25198–99.

Smithers' declaration further addresses Defendants' critiques of Smithers' first report concerning: comparison of certification and in-use standards; testing of just a single Ram 3500 model Truck, the amount of empirical data used for the Ram 3500 model based upon the Ram 2500 model, and conclusions on the similarity of emission trends and behaviors between the two different models; and the use of the term EED as a catch-

all and shorthand phrase describing the phenomena that Smithers observed. *Id.* at PageID.25199–04

Defendants' chief complaint is that months after the expert disclosure deadline, Plaintiffs used their response to Defendants' motion to strike Smithers' first report to supplement that report through the declaration in an untimely manner. Defendants' Memorandum in Support of Motion to Strike Smithers' Declaration, ECF No. 203, Page ID.25296–97. Specifically, the Smithers declaration was submitted almost three months after his first report was due, five weeks after Smithers was deposed, and four weeks after Plaintiffs answered written discovery related to Smithers. *Id.* at PageID.25295. As a result, Defendants seek to strike Smithers' declaration.

Defendants argue that a party's expert witness disclosures must be accompanied by a written report containing "a complete statement of all opinions the witness will express and the basis and reasons for them," and "the facts or data considered by the witness in forming them." Fed. R. Civ. P. 26(a)(2)(A–B). An expert report must be made "at the times and in the sequence that the court orders." Fed. R. Civ. P. 26(a)(2)(D). If a report is not submitted in the sequence directed by the court, the court has discretion to accept and review the report or to reject it as untimely. Fed. R. Civ. P. 16; *Estes v. King's Daughters Med. Ctr.*, 59 F. App'x 749, 753 (6th Cir. 2003). Defendants argue that Smithers' declaration should be stricken because it is untimely, no new circumstances justify it, and

the declaration does not fix any of the first report's substantive flaws that Defendants identified.

But considering the overall context of this case, the Court is unpersuaded to exercise its discretion to strike Smithers' declaration. Since Defendants' motion to strike the declaration was filed, Smithers has timely issued a merits report, which builds upon and supplements both his first report and the declaration. Defendants' counter-expert (Ryan Harrington) has also issued a subsequent report to address Smithers' opinions. Smithers has been deposed again, after Defendants filed their motion to strike Smithers' declaration and after Smithers' merits report was submitted. *See* Exh. 3, Smithers Dep. Transcript (Feb. 10, 2022), ECF No. 222-8. As a result, Defendants have had the opportunity to raise any further critiques and examine Smithers concerning his declaration.

Furthermore, experts may submit supplemental declarations to clarify their opinions for the benefit of the Court. *See In re Iron Workers Local 25 Pension Fund*, No. 04-CV-40243, 2011 WL 1256657, at *7 (E.D. Mich. Mar. 31, 2011) (denying motion to strike supplemental declaration when it clarified the expert's opinion without contradicting his original opinion); *see also Aerel, S.R.L. v. PCC Airfoils, L.L.C.*, 448 F.3d 899, 908 (6th Cir. 2006) (summarizing that experts are permitted to supplement the record with affidavits, provided that they do not directly contradict prior testimony).

Here, Smithers' declaration is at most a clarification of matters contained in his first report and deposition. Contrary to Defendants' argument, the declaration does not contradict Smithers' prior testimony. Nor does Smithers' declaration present any actual or apparent prejudice to Defendants. *See Moore, Owen, Thomas & Co. v. Coffey*, 992 F.2d 1439, 1446 (6th Cir. 1993) (concluding that although an expert affidavit was filed 34 days late, the court could still consider it in ruling on the merits); *cf. Estes*, 59 F. App'x at 752 (striking late expert affidavit because no disclosure was made by the deadline, and the affidavit provided nine months late would cause prejudice); *Counts v. Gen. Motors LLC*, No. 16-CV-12541, 2020 WL 6937937, at *13 (E.D. Mich. Nov. 25, 2020) (striking an expert's supplemental disclosures made after submission of expert reports, including the purchase and testing of two new vehicles, because "doubling the amount of data and tripling the number of diesel testing vehicles" was not merely "supplementary"); *Am. Nat'l Prop. & Cas. Co. v. Stutte*, No. 11-CV-219, 2015 WL 2095868, at *3 (E.D. Tenn. May 5, 2015) (striking late expert testimony where expert's additional testimony was not a supplement, but rather an untimely "brand new opinion").

Finally, Smithers' entire declaration relates to his first report. The declaration summarizes findings from Smithers' class certification report and brings nothing materially new to his opinions. Nor does the declaration contradict that report or his deposition testimony on the report. Smithers does not provide any new tests, data, or conclusions in

the declaration. Smithers' first report gave Defendants' sufficient notice of all topics addressed in the declaration. Therefore, Defendants' motion to strike Smithers' declaration is **DENIED.**

iv. Smithers' December 16, 2021 Merits Report

In Smithers' December 16, 2021 Merits Report, Smithers opines that the active regeneration EED identified in his first report is a defeat device. Smithers' Merits Report (Dec. 16, 2021), ECF No. 221-10, PageID.28900.

Federal regulations define "defeat device" as "an auxiliary emission control device (AECD) that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use." 40 C.F.R. § 86.1803-01. There are two relevant exceptions to this definition: (1) "the need for the AECD is justified in terms of protecting the vehicle against damage or accident" or (2) "such conditions are substantially included in the Federal emission test procedure." *Id.*; *see also* ECF No. 221-10, PageID.28901.

Smithers opines that the UAFs (the values that account for the NOx-increasing effect of active regeneration) that Cummins presented to regulators in its certification applications grossly underrepresent the Trucks' real-world emissions. ECF No. 221-10, PageID.28900–01. Smithers reiterates that active regeneration occurs to remove soot or particulate matter ("PM") buildup from the vehicle's diesel particulate

filter ("DPF") as the DPF continuously traps PM emissions during vehicle operation. *Id.* at PageID.289001. The active regeneration process requires additional diesel fuel injection to raise exhaust temperatures high enough to remove the captured PM. *Id.* This process, which lasts roughly 10-20 minutes, also results in extremely high NOx emissions, often 4 to 10 times higher than non-regeneration emissions. *Id.*

Because of active regeneration's NOx-increasing side effect, Smithers argues that vehicles should be designed to minimize the frequency at which active regeneration occurs. *Id.* Smithers concludes that Cummins, the Trucks' engine manufacturer and designer, did not do so. *Id.* As a result, the Trucks actively regenerate at high frequencies under virtually all scenarios tested, causing the Trucks' emissions to exceed regulatory standards. *Id.* Smithers further opines that because exceeding emissions standards due to frequent active regeneration was not disclosed to regulators, Defendants' DPF regeneration qualifies as a defeat device. *Id.*

As to the other EEDs covered in Smithers' first expert report (ambient temperature, high road grades/towing, and start temperatures), Smithers concludes that Cummins' technical justifications for the behavior Smithers observed in real-world testing are mostly lacking in engineering rigor. *Id.* While there are plausible engineering justifications for the other observed EEDs, Smithers finds

little to no evidence that Defendants studied those justifications and theories in practice. *Id.*

Smithers concludes that Cummins falls short in explaining why these other EEDs are necessary, but Smithers does not find any of them to constitute a defeat device. *Id.* Although Smithers ultimately concludes that the Trucks' system design as a whole is problematic, and that using a NOx adsorber catalyst for this class of vehicles is inappropriate, he lacked sufficient evidence to conclude that Cummins fundamentally misled regulators about the nature of the other EEDs. *Id.* Smithers does reiterate, however, that the Trucks' emissions are far in excess of the allowable standards across a variety of real-world driving conditions; and in general, the Trucks' design allows them to operate with low non-regeneration NOx emissions only under a narrow set of conditions. *Id.*

As for Cummins' AECD disclosures and the applicability of the federal regulation exceptions for a defeat device, Smithers concludes that Cummins' design does not fall under either exception. Cummins' AECD disclosures to the regulators demonstrate that DPF regeneration can occur in a wide range of conditions, including normal vehicle operation. *Id.* Smithers opines, however, that the need for the AECD cannot be justified in terms of protecting the vehicle against damage or accident. *Id.* at PageID.28902. Smithers agrees with Cummins that failure to perform DPF regeneration when necessary can clog the filter, leading to impaired engine performance or engine shutdown. *Id.* But Smithers

points to EPA guidance clarifying that "engine protection would not justify an AECD if the need for engine protection is the result of inadequate design of the engine, when viewed in comparison to currently available technology." *Id.* (citation omitted). Smithers opines that Cummins produced an inadequate engine design that required excessive active regeneration, which produced levels of NOx far above the relevant emissions standards. *Id.*

More specifically, Smithers explains that the excessive active regeneration, and resulting excessive NOx emissions, is largely due to Cummins' choice to use a NOx adsorber catalyst ("NAC") as the NOx aftertreatment system for the Trucks. *Id.* This technology was not required for the 2007–2009 model years in which it was used, but Cummins deployed it voluntarily in part to generate valuable NOx credits. *Id.* Smithers opines that Cummins cannot validly argue that it was limited by current technology because it attempted to go above and beyond what then-existing regulations required (though, according to Smithers, it ultimately failed by designing a system that produced excessive emissions). *Id.*

Smithers also concludes that the Trucks were not at risk of damage or accident even if Cummins had instead chosen to comply with the less stringent, then-existing 2007 regulations. *Id.* And by the 2010–2012 model years, Cummins could have discontinued using NAC technology, instead opting for the fully available selective catalytic reduction ("SCR")

technology for its aftertreatment system in these later models. Smithers explains that SCR technology requires significantly less active regeneration than the NAC system and was readily available by 2010. *Id.* at PageID.28903, PageID.28923. Smithers concludes that because Cummins' design was not limited by current technology in the 2010-2012 timeframe, its active regeneration algorithm does not meet the defeat device exception requirements for engine and vehicle protection. *Id.*

As for the second defeat device exception—substantially including AECD conditions in the federal emissions test procedure—manufacturers that utilize active regeneration quantify the effects on NOx emissions by applying a UAF to their emission test results. *Id.* Smithers states that by providing an accurate UAF value for each required emission test procedure, an active regeneration AECD is exempt from being a defeat device under the second exception. *Id.*

Cummins did provide UAF values for each of its emission tests, but Smithers opines that it misapplied the UAFs to its emission test results, thus inaccurately representing and grossly underestimating the effect on NOx emissions. *Id.* Smithers concludes that Cummins significantly deviated from the standard federal regulatory formula for calculating the UAF, and introduced a new methodology intended to produce a more minimal UAF for certification purposes. *Id.* at PageID.28904.

Smithers explains that the Trucks operate differently under different conditions, which can result in varying emissions and impacts

from regeneration, including producing varying UAFs. *Id.* at PageID.28905. According to Smithers, Cummins felt that it would be inaccurate to disclose a UAF capturing only some impacts of regeneration under limited driving conditions. *Id.* As a result, Cummins used four test drive cycles (LA4, US06, SC03, and the highway fuel economy test) to represent four unique driving conditions. *Id.* Smithers maintains that by using this data to create a "weighted average" UAF, Cummins claimed to account for a broad scope of operating modes. *Id.* Smithers concedes that in principle, using a weighted average UAF is scientifically appropriate. *Id.* But Smithers criticizes Cummins' calculation of its weighted average UAF as failing to accurately depict the NOx-increasing effect from active regeneration. *Id.* In fact, Smithers finds that the UAF value Cummins submitted for certification causes the NOx increase from active generation "to disappear in a nonsensical way." *Id.*

Smithers also summarizes that in November 2006, the EPA released a guidance document for heavy-duty engine dynamometer certification that permitted averaging UAFs across the two relevant certification standards for heavy-duty certification. *Id.* at PageID.28907. The EPA guidance recognizes that vehicles are operated under varying driving conditions, such that regeneration frequency values should reflect the proportion a vehicle's useful life spent driving in different conditions. *Id.* For heavy duty vehicles, the two certification standards are the heavy-duty federal test procedure ("FTP") and the supplemental

emissions test ("SET"). *Id.* Importantly, the EPA guidance only allows manufacturers to account for these two tests. *Id.* The EPA guidance also permits manufacturers to use field data to determine the relative frequency with which vehicles are driven under different conditions to approximate the certification standards. *Id.* Prior to the release of the November 2006 EPA guidance document, Cummins developed its own UAF calculation methodology and initially shared it with regulators in March 2006. *Id.* Cummins later utilized the EPA's November 2006 guidance to support its own methodology. *Id.*

Smithers takes issue with both Cummins' and the EPA's approaches to UAF calculations. He opines that both calculations contain a mathematical flaw that Cummins utilized, resulting in a distorted UAF value that minimized the effect of the Trucks' real-world NOx emissions. *Id.* at PageID.28908. Specifically, Smithers states that certain UAF values needed to be added together to produce a weighted average UAF that accurately accounts for the emissions impact of active regeneration. *Id.* Smithers finds that the EPA guidance calculation implies this, but the guidance ends its "calculation walkthrough"[3] before the necessary summation step. *Id.* Smithers concludes that Cummins failed to sum up individual values to correctly calculate a weighted average UAF, which

[3] Smithers explains that the November 2006 EPA guidance "demonstrates a walkthrough of how to compute a weighted fraction [UAF]" using sample figures shown in Table 5-3 of Smithers' merits report. ECF No. 221-10, PageID.28908.

is what it told the regulators it would do in its disclosures. *Id.* at PageID.28914. As a result, he opines that the true NOx impact of active regeneration is not accounted for in Cummins' methodology. *Id.* at PageID.28915.

Smithers further concludes that Cummins diverges from the EPA's methodology in two other ways. First, Cummins makes use of a "bias factor," which is not referenced in the EPA guidance but introduces values that conflict with real-world test data and unjustifiably skew the UAF to be even smaller. *Id.* at PageID.28908. Second, Cummins' methodology incorporates test cycles that are not part of regulatory certification, which further decreases the weighted UAF value. *Id.*

Smithers states that a competent engineer would conclude that Cummins' "final UAFs do[] not reflect reality." *Id.* at PageID.28915. According to Smithers, based on these blatant inaccuracies, "[t]here is no context in which the regulators would have approved this methodology if they fully understood that the real-world impact of regeneration produced emissions that easily cause the vehicle to exceed the emission standards." *Id.* at PageID.28916. But because the regulators did ultimately approve Cummins' UAF methodology, Smithers assumes that the regulators must have been "misled" by Cummins. *Id.*

Based upon his assumption that Cummins misled the regulators in the UAF certification process, Smithers concludes that Cummins' excessive active regeneration cannot be considered "substantially

covered" by the federal emissions test procedure. *Id.* Therefore, the second federal regulation exception to a defeat device is inapplicable. Smithers thus finds the Trucks' active regeneration process to be a defeat device that produces NOx emissions far above the certified limit and does not fall under any federally recognized exemption. *Id.*

Smithers' merits report further explains the impact of the other EEDs he identified in his first report, including high ambient temperature and exhaust gas recirculation ("EGR") reduction, high engine load NOx limits, and cold and hot starts on NOx emissions. *Id.* at PageID.28918–23. Smithers specifically finds that the Trucks' low ambient temperature NOx limits make the NOx adsorber technology inadequate for the Trucks. *Id.* at PageID.28918. Smithers ultimately concludes that as a practical matter, because the NOx emissions from excessive active regeneration alone are so great, there are almost no conditions under which the 2007–2012 Ram 2500 and 3500 vehicles could meet the relevant emission standards. *Id.* at PageID.28923.

B. DEFENDANTS' EXPERT RYAN HARRINGTON

Defendants raise many critiques of Smithers' opinions, reports, and declaration through their expert, Ryan Harrington ("Harrington"). Harrington has submitted an expert report dated October 27, 2021 (ECF No. 191 (sealed)), and an expert merits report dated February 11, 2022 (ECF No. 222-8 (sealed)).

Harrington is a Principal at Exponent, an engineering and scientific consulting firm, where his focus is on vehicle engineering. Expert Report of Ryan Harrington (Oct. 27, 2021), ECF No. 191 (sealed), PageID.23586. Harrington has over 20 years of experience in the automotive industry and the federal government, including providing analysis and development of federal regulations, policies, and standards on fuel economy, emissions, and motor vehicle safety standards. *Id.* He holds a Master of Science in Automotive Engineering degree from the University of Michigan, Ann Arbor, and a Bachelor of Science degree in Mechanical Engineering from the University of Nebraska. *Id.* In 2008, Harrington was the recipient of the U.S. Department of Transportation ("DOT") Secretary's Gold Medal Award. *Id.*

Harrington has extensive experience in performing analyses on emissions testing, developing regulatory standards, and studying fuel efficiency through his work at DOT and in the private sector. Harrington's other relevant experience is further detailed in his CV submitted to the Court as part of his reports. Expert Merits Report of Ryan Harrington (Feb. 11, 2022), ECF No. 222-8, PageID.32456–65.

Plaintiffs do not challenge Harrington's qualifications to provide opinions on the matters addressed in his reports. The Court finds that Harrington is qualified through his education, experience, and training to provide the opinions in his reports critiquing Smithers' opinions. *See also Counts v. Gen. Motors, LLC*, No. 16-cv-12541, 2022 WL 2078023, at

*23–26 (E.D. Mich. June 9, 2022) (qualifying Harrington as an expert to opine on some (but not all) similar subject matters and noting Harrington's "stellar" career).

C. DEFENDANTS' CHALLENGES TO SMITHERS' FIRST REPORT, DECLARATION, AND MERITS REPORT

Defendants ask this Court to exclude Smithers' expert opinions because they are unreliable, unhelpful to the trier of fact, not relevant, do not use known or accepted methodologies, have not been subject to peer review, do not have a known rate of error, lack supporting data and were not adequately tested, and do not address issues relating to fraud or misrepresentation. ECF No. 192, PageID.23764. The Court addresses the various categories of Harrington's critiques of Smithers' opinions below.

i. Challenges to Smithers' EED opinions

Defendants first challenge Smithers' use of the term excessive emissions devices ("EEDs"). Defendants point out that the term does not appear in any EPA or CARB literature, has never been subject to peer review, and is not in any published treatise, textbook, or article. *Id.* at PageID.23765. Smithers himself admits that this is not a generally accepted scientific term. Smithers Dep. (Oct. 5, 2021), ECF No. 222-8, PageID.32788. Smithers also concedes that an EED is neither an Auxiliary Emission Control Device ("AECD") nor a defeat device under

40 C.F.R. § 86.1803-01. *Id.* at PageID.32788; ECF No. 192, PageID.23774.

Smithers defines EED in his August 16, 2021 report as any "software controls that serve to increase the overall levels of NOx emissions beyond those levels required by the relevant regulatory cycles." ECF No. 184-2, PageID.21577. Smithers explains that he intended EED to be a catch-all phrase that generally describes the causes of increased NOx emissions he observed in testing. Smithers Dep. (Oct. 5, 2021), ECF No. 222-8, PageID.32788. Smithers uses the term EED as "shorthand" to encompass the Trucks' components that collectively cause excessive emissions. *Id.* In essence, Smithers intended EED to capture "everything," from the vehicle's hardware, engine, aftertreatment system, and software, that work together to increase NOx emissions. *Id.* at PageID.32797–99. As long as this term and its origins are explained to the jury, and it is not identified as anything more than shorthand to summarize Smithers' findings, the Court finds that the term EED is understandable and intended to be descriptive rather than technical.

Smithers' reports comprehensively explain that the Trucks contain EEDs, which function the same way in all the Trucks, using essentially identical hardware and software. Smithers summarizes that his testing results reveal how all the Trucks emit excessive emissions during real-world driving and experience decreased fuel economy.

Defendants argue that four of the EEDs (ambient air temperature, road grade, trailer towing, cold and hot start) are well-known principles of physics that do not require expert opinion, making the testimony irrelevant to assisting the trier of fact in understanding the evidence or determining a contested fact. ECF No. 192, PageID.23770. But the complex operation of a highly sophisticated emissions system, including whether certain conditions affect emissions levels, is not within the province of the average juror. Smithers' use of the term EED and his explanations are well within the appropriately wide latitude for an expert's opinions. Smithers has also shown that his EED opinions have a reliable basis in knowledge and experience. *See Jahn v. Equine Servs., PSC*, 233 F.3d 382, 388 (6th Cir. 2000). Taking the above into account, Smithers' opinions regarding EEDs are admissible.

ii. Challenges to Smithers' opinions on Model 3500 testing

Defendants critique Smithers' opinions regarding the testing of Model 3500 Trucks, arguing that his opinions are invalid because they are based on testing just one Model 3500. ECF No. 192, PageID.23776. But Smithers' class certification report documented how the results of the Model 3500 testing are consistent with the Model 2500 testing, analyzed logging data from three of Plaintiffs' trucks, and explained his understanding of how the Model 3500 emissions system operates. *See, e.g.*, ECF No. 184-2, PageID.21608–10, PageID.21621–27. Relatedly, Smithers

used his analysis of the Model 2500 Trucks to reach certain conclusions about the Model 3500 Trucks that were not independently tested. *See id.* at PageID.21626, PageID.21641, PageID.21646.

Defendants contend that this form of extrapolation is improper because it ignores key differences between the models, such as weight, towing capacity, and torque. ECF No. 192, PageID.23777. Indeed, Smithers acknowledges those differences, but concludes that the Model 2500 results are still applicable to the Model 3500 Trucks because the emissions control strategies were the same in both models. ECF No. 199-5, PageID.25201–04; *see also* ECF No. 184-2, PageID.21674 ("The 3500 Ram utilizes the same engine architecture and emissions after treatment system as the 2500."). The fact that Smithers tried to gather more data by testing more than one Model 3500 Truck (but was ultimately unable to test as many Model 3500s as Defendants might have liked) does not negate Smithers' opinions on the Model 3500 systems. Smithers' testing is uniform, consistent, and reaches the same results—that the Trucks emitted excessive emissions during real-world driving.

Moreover, each individual test result cannot be weighed in isolation, but instead, all evidence must be considered in its totality. *See Bledsoe v. FCA US LLC (Bledsoe II)*, 378 F. Supp. 3d 626, 633 (E.D. Mich. 2019). In *Bledsoe I*, this Court held that "Plaintiffs' allegations of the presence of a defect or a defeat device in the identified vehicles, based on results of their PEMS testing on a single Truck, are conclusory; they are not

founded on specific allegations of fact." 307 F. Supp. 3d 646, 657 (E.D. Mich. 2018). But the Court's opinion in *Bledsoe II* later made clear that:

> The key inquiry, as the Court explained is whether "the totality of the allegations amounted to plaintiffs having plausibly pled that the products received did not live up to the claims made by Defendants." . . . Here, Plaintiffs present a detailed accounting of their own extensive PEMS testing, plus chassis dynamometer testing, plus data logging, plus an allegation of a specific defeat device that causes the vehicle to enter active regeneration more frequently in real world driving than when the vehicle senses it is being tested for regulatory compliance.

Bledsoe II, 378 F. Supp. 3d at 632–33.

Here, when considering Smithers' testing in its totality, his conclusions regarding the Model 3500 Trucks are sufficiently sound and reliable to assist the trier of fact. The fact that Defendants' experts may have applied a different methodology in their analysis is insufficient to exclude Smithers' testimony. *See Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 160 (3d Cir. 1999) (explaining that expert testimony cannot be excluded simply because the expert uses one test rather than another, when both tests are accepted in the field and both reach reliable results). Defendants identify the flaws they perceive in Smithers' analysis of the Model 3500 trucks, but "mere weaknesses in the factual basis of an expert witness' opinion bear on the weight of the evidence rather than on its admissibility." *McLean*, 224 F.3d at 800–01. Therefore, Smithers' opinions regarding the Model 3500 Trucks are admissible.

iii. Challenges to Smithers' model years analysis

Defendants similarly claim that Smithers' reports improperly extrapolate test results between model years. ECF No. 192, PageID.23768. But Smithers explains that in focusing his testing on Model 2500 Trucks, he "create[d] a larger sample size to cover the range of model years." ECF No. 199-5, PageID.25202. Furthermore, Smithers responds that his analysis sought "to understand the changes from one model year to the next," but found that the AECDs in various model years "were effectively the same." *Id.* at PageID.25197.

Smithers is allowed to make reasonable assumptions in his report when they are based on valid principles and analyses. *See Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d 768, 791, 794 (6th Cir. 2002) (emphasizing that disputes over the strength of the factual basis of an expert's opinions went to weight not admissibility, as the opinions were "subject to vigorous cross examination and an opportunity for Defendant to introduce countervailing evidence of its own"); *In re Lidoderm Antitrust Litig.*, No. 14-02521, 2017 WL 679367, at *28 (N.D. Cal. Feb. 21, 2017) (denying motion to exclude because the expert's opinion was based on "reasonable assumptions and evidence, and supported by reasoned principles as well as academic scholarship" and while "some of those assumptions [were] disputed," those disputes did not "make [the expert's] reliance on them improper"); *Whirlpool Props., Inc. v. LG Elecs. U.S.A., Inc.*, No. 1:03 CV 414, 2006 WL 62846, at *4 (W.D. Mich. Jan. 10, 2006)

("Selection of an inappropriate universe generally affects the weight of the resulting survey data, not its admissibility." (citation omitted)). The Court will not exclude Smithers' opinion based on his purported extrapolation of results across model years.

iv. Challenges to Smithers' AECD opinions

Defendants attack Smithers for not personally undertaking a sufficiently rigorous analysis of Cummins' AECDs. ECF No. 192, PageID.23768. But Smithers' staff, at his direction, did perform comprehensive AECD analysis and determined that there were not significant differences among the AECDs. *See* ECF No. 199-5, PageID.25197–99. Using staff to complete tasks and gather data relevant to the expert analysis is appropriate. *See Chavez v. Carranza*, 559 F.3d 486, 497 (6th Cir. 2009) (admitting expert testimony that was properly based on intelligence gathered by the expert himself, his staff, and other government agents); *McReynolds v. Sodexho Marriott Servs., Inc.*, 349 F. Supp. 2d 30, 36 (D.D.C. 2004) (summarizing that "an expert may rely on any facts or data 'of a type reasonably relied upon by experts in the particular field,' including . . . relying on one's assistants to carry out analyses that the expert designed." (citation omitted)); *Dura Auto. Sys. of Ind., Inc. v. CTS Corp.*, 285 F.3d 609, 612 (7th Cir. 2002) ("An expert witness is permitted to use assistants in formulating his expert opinion, and normally they need not themselves testify."); *see also Gutierez v. State Farm Lloyds*, No. 5:19-cv-89, 2020 WL 9934407, at *2 (S.D. Tex. Oct. 27,

2020) (finding "no authority in support of the proposition that an expert giving an opinion on damage to property must personally inspect the property as opposed to relying on information gathered by the expert's staff"). Smithers' opinions and conclusions on AECDs are admissible, even if his staff assisted in completing the analysis.

v. Challenges to Smithers' opinions on Truck software

Defendants challenge Smithers' opinions because neither he nor another of Plaintiffs' experts reviewed the Trucks' software despite having the opportunity to conduct such a review. ECF No. 192, PageID.23768–69. In fact, the Court required Cummins to produce unredacted copies of the AECD disclosures Cummins submitted for the Trucks, with the Trucks' calibrations in their native software format. ECF No. 148.

At the complaint stage of this case, Plaintiffs believed that accessing the Trucks' calibration files was necessary to determine why the Trucks' emissions were exceeding emissions standards in real-world settings. Smithers testified that in his opinion, the method that Defendants used to obtain certification approval did not ultimately require Smithers to rely upon the underlying calibrations or software. Smithers Dep. (Oct. 5, 2021), ECF No. 203-4, PageID.25326. Smithers testified that he did not need to review the software to reach his conclusions, because in his opinion, testing alone can "demonstrate how the vehicle behaves[,] particularly in this case where you're testing multiple vehicles under certain circumstances by

repeating the tests across multiple vehicles and looking how the emission control system behaves." *Id.*; *see also* ECF No. 199-5, PageID.25197–98 (explaining how Smithers concluded that the redacted versions of the data he reviewed "were sufficient and that the [unredacted] AECDs provided by the Defense did not offer any additional insight regarding the behavior of the emissions control system or differences in emissions control strategy between model years and model types").

At most, this dispute goes to weight not admissibility. As previously discussed, Smithers' opinions are based on extensive testing and knowledge of how the EEDs function. Smithers' class certification report provided a thorough summary of his own testing and explained how this testing was consistent across models and model years, and consistent with the logging data from Plaintiffs' trucks. Smithers described his methodology in detail, including how the vehicles were selected, how they were tested, and the results of that testing. The Court will not exclude Smithers' opinions on these grounds.

vi. Challenges to Smithers' dynamometer opinions

Through Harrington's analyses and opinions, Defendants take Smithers to task for using a 0.2 g/mi dynamometer emissions standard for the Model 2500 Trucks and 0.4 g/mi for the Model 3500 Trucks to compare portable emissions measurement systems ("PEMS") testing data. ECF No. 192, PageID.23769. Harrington posits that Smithers should have used the

in-use verification testing standards of 0.3 g/mi and 0.5 g/mi relied upon by regulators. *Id.*; ECF No. 191, PageID.23689.

Smithers justifies his decision to use the 0.2 g/mi and 0.4 g/mi standard by clarifying that the factors and conditions he was testing for were unrelated to assessing the durability of the Trucks' emissions technology. *See* ECF No. 199-5, PageID.25199–01. Moreover, Smithers explains that even with the 0.3 g/mi and 0.5 g/mi standards, the Trucks' emissions still greatly exceed these higher limits. *Id.* at PageID.25201; ECF No. 184-2, PageID.21599. Smithers' decision to use different dynamometer emission standards is a proper topic for cross-examination, but his opinions will not be excluded on those grounds.

vii. Challenges to Smithers' opinions on linearity

Defendants object to Smithers use of linearity as being inconsistent with the regulators' policies and standards. ECF No. 192, PageID.23770–72. But this objection arises from Defendants' own characterization of Smithers' testimony on linearity, rather that the testimony itself. While Defendants' claim that "Smithers posits, without reference to any support, that an increase in load on the engine should result in a proportional increase in admissions," *id.* at PageID.23771, Smithers testified that changes in road grade do not "necessarily always" yield linearity. Smithers Dep. (Oct. 5, 2021), ECF No. 192-2, PageID.23809–10. The Court will not exclude Smithers' opinions on linearity. To the extent that Smithers' conclusions on linearity affect the merits of

Plaintiffs' claims, Defendants may challenge the weight that the jury should give to those opinions.

viii. Conclusion

In sum, Smithers' opinions discussed above contain relevant, reliable information, analyses, and data on the Trucks and related issues. Smithers' reports and declaration are based on a comprehensive review of key documents and rely on industry standards throughout. Smithers provided thorough descriptions on how and why he developed the opinions he reached.

Defendants' Expert Harrington offers an extensive set of critiques of Smithers' opinions. While the Court highlights the key objections emphasized in the parties' briefing, the Court has thoroughly considered Defendants' positions. In the end, the dispute between Smithers and Harrington presents a classic "battle of the experts," bearing upon the weight of each expert's testimony, not admissibility. Therefore, the Court will not exclude Smithers' opinions based on Defendants' critiques discussed above.

D. RELEVANCE AND FIT OF SMITHERS' OPINIONS RELATING TO PLAINTIFFS' COMPLAINT

Defendants argue that Smithers' opinions are not relevant and do not comport with Plaintiffs' complaint allegations because Smithers relies on different underlying premises for his opinions on EEDs and defeat

devices than what Plaintiffs specifically alleged. ECF No. 192, PageID.23773.

Plaintiffs' initial defeat device theory centered around the difference between the Trucks' test environment performance on the dynamometer and their real-world performance (measured through PEMS testing). Plaintiffs allege that such differences should not exist unless the emissions system used a device to turn the system off or down during real-world testing. Second Consolidated and Amended Complaint ("SCAC"), ECF No. 62, PageID.8337, ¶ 4; Third Consolidated and Amended Complaint ("TCAC"), ECF No. 255, PageID.34987, ¶ 4, PageID.35001, ¶ 213 (summarizing test results showing that the purported defeat device caused the Truck to detect when it was testing on a chassis dynamometer to emit lower NOx levels than in real-world testing conditions). Plaintiffs thus alleged that Cummins defrauded the regulators and, by extension, Plaintiffs and putative class members. *See* SCAC, ECF No. 62, at ¶¶ 18, 30, 34, 260, 297, 329; TCAC, ECF No. 255, at ¶¶ 18, 30, 34, 262, 299, 331. Plaintiffs also pursued discovery based on that theory.

As discovery progressed, Plaintiffs seem to have abandoned their initial theory that the Truck could detect whether it was being operated in a testing environment to temporarily modify itself accordingly. Instead, Smithers' expert reports and testimony on EEDs, defeat devices, and the other matters discussed above became foundational to Plaintiffs' claims. Indeed, Smithers admits he has found no evidence that the

Trucks engage in cycle detection behavior to operate differently when in testing conditions. Smithers Dep. (Feb. 10, 2022), ECF No. 222, PageID.29125–26. Still, the SCAC (and now the TCAC) detailed the excessive emissions during real-world driving and decreased fuel economy at the heart of Smithers' report. Throughout discovery, Plaintiffs have gathered even more information on how these problems developed in the Trucks, including facts that differ from their original theory on the Trucks' ability to detect testing environments.

An expert opinion must be helpful to the trier of fact by addressing the relevant issues. *Greenwell v. Boatwright*, 184 F.3d 492, 496 (6th Cir. 1999) ("The relevance requirement ensures that there is a 'fit' between the testimony and the issue to be resolved by the trial."). The expert's opinion must be "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *Daubert*, 509 U.S. at 591 (citation omitted).

Smithers' opinions meet these relevance and fit requirements. Smithers describes the results of his testing, data gathering, and a host of reasonable analyses based on the discovery conducted in this case. While Smithers' findings rely on different underlying premises for the EEDs and defeat devices than those specifically alleged by Plaintiffs, Smithers' opinions share a fundamentally similar core. Both Plaintiffs and Smithers posit that the Trucks emitted NOx at levels far in excess of regulatory standards, when considering what the existing technology

required and what a reasonable consumer would expect from a truck touting its advanced emissions control technologies.

As explained in detail above, Smithers opines that the EEDs cause the Trucks' emissions to exceed regulatory standards and decrease their fuel economy. Smithers collected his own evidence and reached conclusions not based on legal pleadings, but findings within his expertise. Smithers opines, based on his research, that the problematic conditions of the vehicles—excessive emissions and decreased fuel economy—were caused by the EEDs, which were the result of Defendants' deliberate choices. Smithers opinions plainly fit into Plaintiffs' allegations and the factual disputes at issue. An underlying factual premise of Plaintiffs' case has changed based upon the discovery of additional and different facts. But Smithers' opinions remain relevant to and aligned with the core allegations and theories raised in Plaintiffs' complaint. Therefore, this Court declines to strike Smithers' opinion on relevance grounds.

E. SMITHERS' OPINIONS ON CUMMINS' ACTIVE REGENERATION FUNCTION

i. Smithers' opinions on federal regulation of defeat devices and UAF calculations

Smithers opines that Cummins' active regeneration function is a defeat device as defined by federal regulations. Here, the parties dispute whether Cummins substantially included its active regeneration function in the federal test procedures, which would trigger an exemption to the function being a defeat device. In other words, if Defendants

substantially included the active regeneration function as an Upward Adjustment Factor ("UAF") in its test procedures, then the function is not a defeat device pursuant to 40 C.F.R. § 86.1803-01.

Accordingly, Smithers' merits report examined Cummins' use of its UAF for active regeneration. Smithers opined that because Cummins calculated its UAF using flawed methodology to intentionally conceal the actual emissions impact, Cummins' active regeneration function was not substantially included in the federal test procedure. ECF No. 221-10, PageID.28900–01. Consequently, in Smithers' opinion, the Trucks' active regeneration function constitutes a defeat device. *Id.*

Smithers' conclusion rests on his finding that Cummins deviated from established methods for calculating the UAF, failed to follow EPA guidance, and purposefully concealed the emissions impacts of its active regeneration strategy. *Id.* at PageID.28904–16. Smithers finds that rather than using the UAF calculation method supported by federal regulations, Cummins misled regulators into approving its use of a weighted average of irrelevant regulated drive cycles in calculating the UAF for its Trucks. *See id.* at PageID.28904–05.

Smithers explains that Cummins did not present the regulators with a true weighted average because it skipped a crucial final calculation step, and thus did not properly disclose an acceptable UAF. *Id.* at PageID.28908, PageID.28914. Smithers opines that Cummins sought to minimize the weighted average UAF for certification purposes,

thereby deceiving the regulators into accepting a smaller weighted average than if Cummins had correctly completed its calculation. *Id.* at PageID.28907.

In short, Smithers concludes that Cummins' certification results were false and misleading, and did not accurately reflect the Trucks' true NOx emissions. *Id.* at PageID.28916. Smithers notes in his merits report that "the regulators would have had to believe this [UAF] value was meaningful and representative of real world emissions," but the regulators would not have approved Cummins' methodology "if they fully understood that the real world impact of regeneration produced emissions that easily cause the vehicle to exceed the emission standards." *Id.*

Smithers acknowledges that the 2006 EPA guidance does not explicitly describe the final summation step in the process for calculating a weighted average (i.e., adding the weighted fraction UAF values together). *Id.* at PageID.28909. But Smithers suggests that this step to attaining a weighted average is so obvious that the EPA did not need to instruct manufacturers to add the weighted fractions together. *See id.* Smithers concludes that Cummins' decision to skip this summation step demonstrates that it intended to defraud the EPA. *Id.* at PageID.28914, PageID.28916. Based on Smithers' knowledge of weighted averages, his UAF calculations, and understanding of regulatory oversight functions, he concluded that the EPA requires fractional UAF values to be added together to properly attain a weighted average UAF. *Id.* at PageID.28908.

Smithers also points out that the 2006 EPA guidance permitted averaging UAFs across the two relevant certification tests for heavy-duty engine dynamometer certification. *Id.* at PageID.28907. Contrary to the EPA guidance, Cummins' methodology included not only the two test cycles recognized by the EPA (LA4 and HWFET), which are applicable to the subject Trucks, but also two other test cycles (US06 and SC03). *Id.* at PageID.28908–09, PageID.28914. Smithers claims that these two other test cycles (US06 and SC03) are irrelevant to the Trucks and have no meaningful standards with which they are required to comply. *Id.* at PageID.28909. By including these two irrelevant test cycles, Smithers opines that Cummins acted inconsistently with federal guidance and effectively negated any reasonable use of the weighted fractions. *Id*

Smithers also criticizes Cummins for straying from the EPA guidance by using a "bias factor" to further reduce its UAF. *Id.* at PageID.28912–15. Smithers explains that Cummins relied on a bias factor value to support its claim that active regeneration occurs more frequently in steady state (highway) conditions. *Id.* at PageID.28912. Smithers' merits report closely examines Cummins' bias factor calculation and identifies two main flaws in the biasing technique. *Id.* at PageID.28912–14. First, Smithers finds that the bias factor double-counts the effects of any theoretical differences between city and highway driving conditions. *Id.* at PageID.28913. Second, Smithers states that there is no empirical

evidence to support the use of the bias factors that Cummins applied. *Id.* at PageID.28913–14.

ii. Smithers' opinions on Cummins' alleged fraud of the regulators

The EPA is the regulatory agency entrusted by Congress to ensure that passenger vehicles sold in the United States comply with the Clean Air Act ("CAA"). *See* 42 U.S.C §§ 7521–7554. The EPA has promulgated regulations interpreting the CAA to ensure that regulated entities comply with CAA mandates. In the auto emissions area, the EPA has issued guidance on infrequent active regenerations (events that increase NOx emissions which may not occur during the mandatory federal test cycle known as FTP-75). The EPA publishes instructions to certificate applicants for calculating infrequent regeneration adjustment factors ("IRAFs") to be added to the applicant's FTP-75 results. *See* Expert Merits Report of Ryan Harrington, ECF No. 221-7, PageID.28800, PageID.28802–03, PageID.28806. The Upward Adjustment Factors ("UAFs") described by Smithers are a form of IRAFs that reflect a net increase to expected NOx emissions. *Id.* at PageID.28800 n.1.

On November 6, 2006, the EPA issued a guidance document titled "Alternative Guidance on Infrequent Regeneration of Diesel Particulate Filters for Heavy-Duty Highway Vehicles" (the "IRAF Guidance"). *Id.* at PageID.28808. Harrington summarizes that the EPA's IRAF Guidance allowed manufacturers to test the vehicle over multiple drive cycles,

rather than limiting certification to the FTP-75 drive cycle results as required by 40 C.F.R. § 86.004-28(i)(1). *Id.* at PageID.28806–08. Harrington explains that the IRAF Guidance required applicants to calculate a UAF based on each different test drive cycle. But the IRAF Guidance makes clear that only the UAF from the FTP-75 results would be considered in determining whether the engine meets NOx emission limits. *Id.* at PageID.28809–10, PageID.28818. Contrary to Smithers, Harrington concludes that the IRAF Guidance does not require applicants like Cummins to add up the results from each separate drive cycle on which the vehicle was tested to create a composite UAF. *Id.*

Harrington contends that Smithers' UAF calculation methodology imposes an unnecessary step that Smithers acknowledges is not required. Specifically, Smithers suggests that the weighted average from each certification cycle should be added together to form a single UAF calculation. *See* ECF No. 221-10, PageID.28914. Smithers agrees that Cummins disclosed its regeneration algorithm and UAF methodology (the alleged defeat device) to the regulators. *Id*. at PageID.28907, 28916. Yet, Smithers opines that Cummins misled the regulators as to the meaning of its UAF calculations:

> Strictly speaking, the methodology can be inferred from the data presented in the document [CMI-00425313]. However, the existence of [Cummins'] presentation [to the regulators] does not clearly evidence full disclosure. There is no documentation of the discussion, questions, or context of the conversation with regulators regarding this document and the methodology enclosed. Clearly, the

> regulators did approve of the final values calculated by this methodology and therefore the methodology itself, but there is no evidence that the regulators fully understood the concept of [the] methodology or the meaninglessness of the final UAF values.

Id. at PageID.28909.

iii. The bases for Smithers' opinions that Cummins committed fraud in its regulatory certification application are unreliable

The Court is concerned that Smithers' opinions concluding that Cummins committed fraud on the regulators are based primarily upon assumptions rather than a firm factual foundation. In his analysis, Smithers fails to account for the evidence showing that Cummins fully disclosed key information to the regulators. Instead, Smithers concludes that because Cummins did not calculate the UAF in the manner Smithers believes it should have, the regulators must have been defrauded.

Smithers' merits report summarizes testimony from Cummins' Rule 30(b)(6) witness, Samuel Geckler, noting that "regulators approved Cummins' use of a weighted average" as part of its UAF or IRAF calculation which averaged values from four different test-driving cycles: LA4, US06, SC03, and the highway fuel economy test. ECF No. 221-10, PageID.28905 (citing Geckler Dep. (Nov. 2, 2021); ECF No. 241-6, PageID.34324–25). Because Smithers opines that Cummins did not use a valid weighted average for the UAF, he assumed that the regulators were necessarily misled based on the results Cummins disclosed.

Smithers also cites Geckler's testimony that: "in the plurality of Upward Adjustment Factors for NOx, there would be . . . a full accounting of the regeneration, [including] the infrequent regeneration impact." *Id.* at PageID.28915 (citing Geckler Dep. (Nov. 2, 2021), ECF No. 241-6, PageID.34327. According to Smithers, this portion of Geckler's testimony "confirms that the emissions impact of regeneration can only be understood when accounting for all four of the fractional Upward Adjustment Factors," such that Cummins submitted a figure that "is meaningless on its own and completely inappropriate for use in certification." *Id.* at PageID.28916.

But Smithers' reliance on two of Geckler's statements to conclude that Cummins misled the regulators unreasonably discounts the fact that Cummins provided comprehensive UAF information to the regulators. Smithers' assumption of fraud on the regulators thus lacks sufficient grounding. In his merits deposition, Smithers specifically acknowledged that the hardware Cummins disclosed to regulators accurately depicted the engine and its configuration. Smithers Dep. (Feb. 10, 2022), ECF No. 222, PageID.29118. Likewise, Smithers did not have any evidence that Cummins submitted a UAF value based on tests it did not actually perform. *Id.* at PageID.29130. And Smithers had no opinion on whether Cummins followed the UAF methodology consistent with its disclosures to regulators. *Id.* at PageID.29130. Moreover, Smithers testified that he did not have an opinion on whether "Cummins calculated

its UAF values using a methodology different than what they told the regulators they were doing." *Id*. at PageID.29130.

Furthermore, there is ample evidence that Cummins provided significant federal test procedure and UAF methodology information to the regulators, who then approved the emissions system with adequate information. For example, Geckler testified that Cummins worked closely with the regulators to obtain approval of its methodology and thoroughly disclosed its processes. *See* Geckler Dep. (Nov. 2, 2021), ECF No. 241-6 (sealed), PageID.34326 (explaining that Cummins worked "with the agencies" in "the regulatory process for IRAFs," and that the regulators "approved the methodology that [Cummins] utilized" based on regulatory guidance). Geckler's account is corroborated by the fact that between 2006 and 2009, Cummins prepared numerous PowerPoint presentations for the regulators and met regularly with them to address Cummins' UAF calculation methodology, discuss Cummins' proposals, and respond to regulators' questions on Cummins' methods. *See* ECF No. 222-3 (exhibit collecting Cummins' presentations to the regulators); ECF No. 221-7, PageID.22803 n.9 (Harrington's merits report noting that Cummins gave "[a]t least ten presentations . . . to the agencies related to UAF/IRAF between March 2006 and December 2009"). Smithers did not attend these meetings and acknowledged that he does not know what occurred during them. ECF No. 222, PageID.29134–35, PageID.29142, PageID.29145, PageID.29150–51, PageID.29160–61.

Moreover, in response to Cummins' April 17, 2008 letter requesting CARB's approval for its weighting factors and bias factor methodology for model year 2010, CARB stamped that request as "Approved." Exh. 44, ECF No. 222-6 (sealed), PageID.32041. As previously discussed, Smithers agrees that Cummins[4] disclosed its methodology and testing results to the regulators who then approved the methodology. Smithers Dep. (Feb. 10, 2021), ECF No. 222, PageID.29130, Page ID.29143. Beyond disputing the accuracy of Cummins' UAF test results, Smithers admits that he ultimately does not know whether Cummins falsified data submitted to the regulators. *Id.* at PageID.29129.

The foundation for Smithers' fraud opinions is further weakened by the fact that he cannot identify any calculations that Cummins did not disclose to the regulators, and notes that "the regulators did approve of the final values calculated by [Cummins'] methodology and therefore the methodology itself." ECF No. 221-10, PageID.28909–10. Smithers also does not cite any authority supporting his criticism of the EPA's IRAF calculation guidelines, which do not explicitly identify the final summation step that Cummins purportedly skipped. Nor does Smithers identify support for his opinion that a certification methodology disclosed to and approved by regulators can constitute a defeat device. Smithers does not point to any relevant documents that the regulators could not

[4] Smithers has no opinions specific to Defendant FCA on this issue. ECF No. 222, PageID.29167.

consider in certifying the Trucks. Smithers does not cite any communications from the regulators reflecting their supposed lack of understanding of Cummins' UAF methodology or their need for more information. Smithers merely speculates that the regulators did not comprehend what was provided to them. On the other hand, the record shows that Cummins disclosed its active regeneration UAF methodologies to the regulators, and those methodologies were approved.

Smithers has failed to state a reliable basis for his opinion that EPA and CARB did not fully understand the UAF values that Cummins reported or the methodology used to generate those values. Consequently, Smithers' opinions on the regulators' understanding of Cummins' methodology and alleged fraud will be excluded because they are based on speculation and will not assist the trier of fact. *See Smesler v. Norfolk So. R.R. Co.*, 105 F.3d 299, 303 (6th Cir. 1997) ("An expert opinion that is based on scientifically valid principles will satisfy Fed. R. Evid. 702; an expert's subjective belief or unsupported speculation will not."); *Meemic Ins. Co. v. Hewlett-Packard Co.*, 717 F. Supp. 2d 752, 767 (E.D. Mich. 2010) (excluding expert opinion "based on personal conjecture and speculation" because the opinion "will confuse and mislead, rather than assist, the trier of fact").

In excluding Smithers' opinions that the regulators were deceived by Cummins, the Court must also exclude Smithers' opinion that Cummins' active regeneration function is a defeat device. Aside from his opinions on the alleged fraud that the Court has determined to be

inadmissible, Smithers lacks a reliable basis for opining that the active regeneration function was not substantially included in the federal test procedure. As a result, the active regeneration function does not meet the definition of a defeat device pursuant to 40 C.F.R. § 86.1803-01, and Smithers' opinions that the active regeneration function is a defeat device are excluded.

Defendants' Expert Harrington offers detailed critiques of Smithers' opinions on defeat device issues, as documented in Harrington's reports. While the Court has considered Harrington's arguments, the bases for excluding Smithers' opinions on the active regeneration function as a defeat device are as set forth above. To the extent Harrington's opinions are consistent with the Court's findings, the Court does not specifically ground its decision upon Harrington's reports or testimony. In sum, on the defeat device issue, this is not a classic "battle of the experts" over the weight of the experts' opinions. Rather, the Court finds that Smithers' defeat device opinions are inadmissible. Therefore, as to Smithers' opinions on alleged fraud of the regulators and defeat devices, the Court **GRANTS in part** Defendants' Motion to Exclude.

F. PLAINTIFFS' EXPERT EDWARD STOCKTON

i. Stockton's qualifications

Stockton has a bachelor's degree in economics from Western Michigan University, and a master's degree from the Department of Agricultural and Resource Economics at the University of Arizona, in

which his concentration was applied econometrics. Declaration of Edward M. Stockton, ECF No. 175-3, PageID.19361. His career includes at least 30,000 hours of providing professional services within the retail automotive industry for clients. *Id.* at PageID.19362.

Stockton has been employed at Fontana Group, Inc. since 1998, where he has worked as an analyst, senior analyst, senior financial analyst, case manager, Director of Economics Services, and now Vice President. *Id.* His professional experience includes 20 years of studying markets where manufacturers sell durable goods through networks of authorized outlets, including in the automotive industry. *Id.* Stockton has conducted hundreds of studies on the new and resale retail markets for new and used vehicles, with emphasis on pricing mechanisms and pricing behavior. *Id.* at PageID.19363. Stockton's studies of resale, or used, vehicle markets and prices have included evaluating price levels and elements of pricing for millions of vehicles. *Id.* These studies also include analyzing price diminution from market disruptions, such as product defects, covering well over one million vehicles. *Id.*

Stockton has been accepted as an expert in proceedings before state and federal courts, administrative courts, and arbitration panels. *Id.* at PageID.19364. His expert testimony has been accepted by those courts and panels on the topics of general and franchise economics, dealer network and market analysis, economic damages, systems for the allocation of scarce product among dealerships, statistics, econometrics,

dealership operations, dealership finance, analysis of franchise markets, and general knowledge of the automotive industry. *Id*

Defendants point out that Stockton's opinions were excluded in a prior case on NOx emissions overpayments (the subject of one of his opinions here). Defendants' Motion to Strike and Exclude the Declaration and Opinions of Plaintiffs' Expert Edward Stockton, ECF No. 194, PageID.24599 (citing *In re Volkswagen "Clean Diesel" Mktg., Sales Pracs., & Prod. Liab. Litig.*, 500 F. Supp. 3d 940, 951 (N.D. Cal. 2020)). In that case, the court questioned whether Stockton's overpayment model was appropriate for the plaintiffs' Volkswagen "TDI premium" analysis, which "attempt[ed] to measure the premium paid for the 'bundle of attributes' offered in all TDI vehicles." *In re Volkswagen*, 500 F. Supp. 3d at 945. The court excluded Stockton's damages analysis because the TDI premium represented the excess price paid for a "bundle of attributes" not specifically limited to the car's low emissions or "clean diesel" features. *Id.* at 951–52.

But Stockton's opinions in this case will be assessed based upon the opinions, analyses, and facts here, not prior cases in which Stockton provided opinions. As described below, Stockton specifically identifies and isolates the benefits that FCA touted as part of the Trucks' clean diesel features. *See* ECF No. 175-3, PageID.19398; *see also In re Volkswagen*, 500 F. Supp. 3d at 951 (explaining that "if Plaintiffs presented evidence of a low emissions premium, there could be indirect but concrete financial harms associated with that premium").

In this case, Stockton provided a declaration dated August 16, 2021 in support of class certification. ECF No. 175-3. That declaration was later supplemented by his merits report dated December 16, 2021. Both are addressed in this opinion. The Court finds that Stockton is qualified through his education, experience, and training to provide the opinions in his declaration and merits report. *See also Counts*, 2022 WL 2078023, at *23 (denying *Daubert* motion to exclude Stockton's opinions on similar subject matters, and noting that Stockton "is well qualified to opine on economic-damages models").

ii. Stockton's August 16, 2021 declaration

Stockton submitted a declaration dated August 16, 2021 in support of Plaintiffs' motion for class certification. Stockton's opinions rely on the assumption that the EEDs described by Plaintiffs' Expert Smithers are present in the Trucks. ECF No. 175-3, PageID.19367. Based on this assumption, Stockton opines that putative class members suffered economic harm by: (1) overpaying for the Trucks at the point of purchase because of the undisclosed EEDs; and (2) unwittingly assuming unreasonable excess operating costs because the undisclosed EEDs consumed additional fuel. *Id.* at PageID.19368. Importantly, Stockton also concludes that reasonable, reliable, and feasible methods exist to calculate damages on a class-wide basis. *Id.* Stockton sets out two damages models—an Overpayment model and Excess Fuel Consumption model—to quantify the class-wide injuries he describes.

1. Stockton's proposed Overpayment model

Stockton begins with the premise that EEDs are a "negative characteristic" bundled with the Trucks' other features, making the Trucks less valuable than the as-represented Trucks for which Plaintiffs bargained. *Id.* at PageID.19378. In addition, Stockton concludes Defendants charged Plaintiffs a premium for an enhanced emissions system marketed as the Trucks' Ultra-Clean Diesel ("UCD") system. *Id.*

Stockton's opinions are based on elements of decision theory, which assumes that a consumer at the point of purchase would rank-order the Trucks with the EEDs lower or no higher than comparable vehicles with typical emissions features. *Id.* at PageID.19374. Stockton opines that an emissions system producing NOx in excess of regulatory limits, "at the very least, entirely reverses the Ultra-Clean premium associated with the Class Vehicles." *Id.* at PageID.19396. Stockton states that Plaintiffs revealed their preference for Defendants' clean diesel features by buying the Trucks without knowing that the Trucks' EEDs cancel out their purportedly "clean" qualities. *Id.*

Stockton explains that a "conservative estimate" of class-wide economic harm is the amount that consumers paid for the UCD emissions system. *Id.* at PageID.19397. But Stockton clarifies that the amount consumers actually paid for the UCD system is not necessarily the UCD's list price. *Id.* In general, "[r]etail transaction prices for most automotive products tend to be lower than list prices." *Id.*

As such, Stockton incorporates "discount" factors that would reduce the actual overpayment for the Trucks' UCD feature. According to FCA's internal documents, the Trucks' emissions premium is considered: lower than the cost of the emissions system; a cost recoupment; and a positive marketing feature to help dealerships sell the Trucks. *Id.* at PageID.19398. Stockton assumes that by the time the Trucks are available to consumers, FCA has already reduced the UCD premium to a level that FCA believes is "value-enhancing" for sales purposes. *Id.* And because consumers generally do not pay the full sticker price for vehicles, Stockton applies a further discount to the UCD premium price. Stockton explains that if a consumer received a "discount of 10% off of MSRP," he would proportionally reduce the "ultra-clean emissions premium by 10% for the purposes of calculating overpayment harm at the point of purchase." *Id.* at PageID.19398.

Furthermore, Stockton concludes that the proper aggregate damage amount from overpayment is calculated at the vehicle level. *Id.* However, if deemed necessary to do so, Stockton states that damages can be allocated among multiple owners of a single vehicle using reliable, recognized, and feasible economic methods. *Id.* In that scenario, multiple subsequent owners of a single vehicle would receive damages allocated based upon the share of the vehicle's value that was consumed during each owner's possession. *Id.* at PageID.19399. Stockton notes that ownership data, including identity of owners and respective time of

ownership are available, without claimant input, from state agencies and likely from automotive data firm IHS Markit Automotive ("IHS"), which record and compile vehicle registration data. *Id.*

2. Stockton's proposed Excess Fuel Consumption model

In addition to overpayment at the point of purchase, Plaintiffs claim that the EEDs caused the Trucks to consume excess fuel under normal driving conditions. *Id.* at PageID.19392. If true, Plaintiffs then unanticipatedly assumed higher operating costs by purchasing the Trucks. *Id.* Stockton's Excess Fuel Consumption damages model considers purchasing incrementally more fuel for reasons attributable to the EEDs to be an economic harm to the putative class. *Id.*

While consumers certainly consider fuel to be an expected cost of purchasing and operating a car, here, excess fuel consumption relates to the unanticipated additional fuel that Plaintiffs allege the EEDs caused the Trucks to consume. *Id.* Because Plaintiffs theorize that the EEDs cause the Trucks "to consume more fuel given any number of miles driven, the costs of purchasing that additional fuel are incremental operating costs directly caused by the EEDs." *Id.* Stockton's declaration also elaborates on how he models excess fuel costs using discount rates, the reduction in expected fuel economy for the Trucks provided by Smithers, and other analyses. *Id.* at PageID.19402–05.

Stockton's Excess Fuel Consumption model relies on two primary variables: fuel prices and miles driven. For fuel pricing, Stockton uses pricing data from the U.S. Energy Information Administration ("EIA"), which "maintains historical records of both gasoline and diesel fuel prices by week, month, or year and also provides both nationwide and regional average prices." *Id.* at PageID.19405. For miles driven, Stockton expects mileage data to be available from two sources. First, Stockton claims that FCA possesses data on all Truck odometer readings observed on dates that the Trucks received warranty or recall service.[5] *Id.* Second, Stockton explains that the U.S. Driving Survey "is a large-sample study of reported driving habits of U.S. consumers." The Survey captures "odometer readings for vehicles of different ages, types, brands, models, and engine types," allowing for class-wide estimates of typical driving miles and the impact of vehicle age on driving miles. *Id.*

Stockton further explains that the EPA produces estimates of expected fuel consumption costs for most U.S. light vehicles. *Id.* Although

[5] Similarly, Stockton explains that FCA has mileage accumulation estimates for the Trucks because manufacturers maintain service records of vehicles serviced under warranty and under retail at their authorized franchised dealerships. ECF No. 175-3, PageID.19406. These records provide information about the kinds of repairs executed along with odometer readings at the time of service. *Id.* Stockton states that this information can be used to determine both the commencement of excess fuel consumption and the average distance accumulations for vehicles at the vehicle identification number ("VIN") level. *Id.* Stockton also emphasizes that this data does not require individualized inquiry. *Id.*

Stockton does not rely upon the EPA estimates to calculate fuel costs, the estimates are useful for their assumptions on typical driving miles and per-gallon diesel fuel prices. *Id.* at PageID.19405–06.

3. Stockton's proposal for calculating class-wide damages

Stockton concludes that his damages models can be reliably and manageably applied to calculate economic harm for a nationwide putative class. To identify Trucks within Plaintiffs' proposed class definition, Stockton states that IHS Markit Automotive "provides data to virtually all major entities that evaluate the retail automotive industry." *Id.* at PageID.19406. IHS specifically "works with manufacturers and state agencies to tabulate, refine, anonymize, and organize information drawn from vehicle registrations." *Id.* Stockton claims that FCA "cooperates with IHS in this process, leading to a high level of data quality." *Id.* IHS specifically maintains data on the number of cars in operation "during specific time frames by make, model, model year, and geography." *Id.* By using this data to calculate the rate at which the Trucks leave the consumer fleet (also called the "scrappage rate"), Stockton can accurately estimate the Trucks' useable lifetimes. *Id.*

Lastly, Stockton notes that IHS provides detailed information on the resale vehicle market, allowing him to identify successive owners who may be eligible to recover for excess fuel consumption. *Id.* at PageID.19407–06. Stockton describes numerous other reliable data

sources that can support his models' class-wide damages calculations. *Id.* at PageID.19407–09.

iii. Stockton's December 16, 2021 Merits Report

Stockton's December 16, 2021 merits report supplements and incorporates his August 16, 2021 declaration in support of class certification. Merits Report of Edward M. Stockton (Dec. 16, 2021), ECF No. 217-2. In his merits report, Stockton executes the models described in his class certification declaration and applies those models on a class-wide basis. *Id.* at PageID.26506. He also describes the specific data sources underlying his economic loss models and presents estimates of economic loss from overpayment and excess fuel consumption. *Id.*

As previously discussed, Stockton's damages models are based on recovery for overpayment at the time of purchase attributable to the undisclosed presence of the EEDs, and recovery for economic harm from excess fuel consumption caused by the EEDs. *Id.* Stockton calculates overpayment and excess fuel consumption damages on a class-wide basis. *Id.* at PageID.26507–08. And without opining on whether such calculations are "relevant in a legal sense," Stockton also calculates economic harm for Trucks that migrated outside the FCA dealer network because Stockton concludes that even non-putative class members suffer some residual overpayment harm. *Id.* at PageID.26507.

1. The effect of excluding Smithers' defeat device opinions on Stockton's opinions

Stockton's Overpayment model is premised on estimating "economic harm if the EED [in the Trucks] is found to function as a Defeat Device." PageID.26525. As explained above, however, the Court has excluded Smithers' conclusion as to the presence of a defeat device. Consequently, Stockton's opinions on economic damages that specifically assume the presence of a "defeat device"—as defined by Smithers and federal regulations—are not admissible unless Plaintiffs can prove that Defendants deployed defeat devices without relying on Smithers' inadmissible fraud-on-the-regulators theory.

But as explained above, Smithers' opinions on the presence of EEDs are admissible and reliable. Stockton specifically theorizes that the "estimate of economic harm from Overpayment from the EED is predicated on finding that the EED offsets the incremental positive benefit of the premium emissions feature." *Id.* Moreover, Stockton recognizes that both defeat devices and EEDs are "inferior and non-conforming . . . emissions features" that diminish the positive value of the Truck, and notes that "models that quantify overpayment harm attributable to the EED also measure negative impact on vehicle emissions characteristics from the Defeat Device." *Id.* at PageID.26509, PageID.26525. As for Stockton's Excess Fuel Consumption model, Stockton explains that his model "tak[es] into account Excess Fuel

Consumption attributable to the EED." *Id.* at PageID.26518. Therefore, Stockton's opinions that rely on the presence of an EED (based on Smithers' admissible EED opinions) remain admissible.

2. Stockton's execution of the Overpayment and Excess Fuel Consumption models

In his merits report, Stockton models economic harm from overpayment "by estimating the degree to which consumers overpaid on a net basis for the Class Vehicles as a result of the undisclosed presence of the EEDs" at the point of purchase. *Id.* at PageID.26522. As discussed in greater detail in addressing Defendants' critiques below, Stockton assumes that the premium price of the Trucks' UCD emissions system is $995. *Id.* Stockton explains that Defendants used the $995 premium price to "recover costs" spent equipping the Trucks with the purportedly "clean" emissions feature. *Id.* Specifically, Defendant FCA "directly recoups cost by way of sales to authorized dealerships." *Id.* The dealerships then "resell[] authorized goods for a profit to end using consumers." *Id.*

Stockton's Overpayment model calculates a net overpayment for each model year (2007-2012) and each model (Ram 2500 and Ram 3500) "equal to $995 multiplied by the relevant transaction price as a percentage of MSRP." *Id.* at PageID.26522–23. Stockton explains that this formula accounts for the fact that dealerships generally receive a discount when purchasing cars from FCA, and the dealerships provide

consumers with a discount below MSRP sticker price. Therefore, to capture a consumer's overpayment more accurately, Stockton's formula multiplies the discounted transaction price as a percentage of MSRP to proportionally discount the $995 UCD sticker price. *Id.* at PageID.26513–18. Stockton's calculations for transaction price as a percentage of MSRP are reflected in Tab 11 of his report. *Id.* at PageID.26602. As shown in Table 6 of his report, Stockton then calculates net per-vehicle overpayments amounts in respective year dollars and 2021 dollars (adjusted for inflation). *Id.* at PageID.26523.

Stockton also calculates the estimated economic harm attributable to the excess fuel consumption based on the undisclosed presence of EEDs. Stockton uses two Excess Fuel Consumption models: one based on EPA-estimated fuel Prices, and the other based on observed historical fuel prices. *Id.* at PageID.26527. Stockton's Excess Fuel Consumption models are applicable to both the national and state-specific classes. *Id.* at PageID.26528–29. Stockton's excess fuel consumption calculations are based on how much more putative class members spent on fuel given the "baseline fuel economy" in city and highway conditions, percentage of miles driven in city and highway conditions, and EPA estimated and historical fuel costs. *Id.* at PageID.26527–29.

G. DEFENDANTS' EXPERT LORIN HITT

Defendants critique Stockton's opinions, report, and declaration through their expert, Lorin Hitt ("Hitt"). Hitt has submitted an expert

declaration dated October 28, 2021 (ECF No. 217-5), and an expert merits report dated February 11, 2022 (ECF No. 217-6).

Hitt is the Zhang Jindong Professor of Operations, Information and Decisions at the University of Pennsylvania, Wharton School. Declaration of Lorin M. Hitt, ECF No. 217-5, PageID.27064. Hitt received his Ph.D. in Management from the Massachusetts Institute of Technology Sloan School of Management in 1996, and his Sc.B. (1988) and Sc.M. (1989) degrees in Electrical Engineering from Brown University. *Id.*

As a member of the Information Strategy and Economics Group at the University of Pennsylvania, his research and teaching focus on the economics of consumer behavior, firm organization, and market structure, with particular emphasis on the role of information on pricing, performance, and competition. *Id.* Hitt has taught undergraduate, masters, doctoral, and executive education level courses at the University of Pennsylvania and the Massachusetts Institute of Technology on competition and customer pricing in a variety of commercial and consumer markets, information systems management, economics of technology, and data analysis. *Id.*

Hitt has prior experience in litigation matters where he evaluated the value of a product or product features, including products such as automobiles, all-terrain vehicles, trucks, and others. *Id.* His expert opinions in these matters have been accepted in federal and state courts.

Id. Hitt has other relevant experience set forth in his CV submitted to the Court. *Id.* at PageID.27100–13.

Plaintiffs do not challenge Hitt's qualifications to provide opinions on the matters addressed in his declaration and merits report. The Court finds that Hitt is qualified through his education, experience, and training to provide the opinions in his declaration and merits report critiquing Stockton's opinions. *See Counts*, 2022 WL 2078023, at *28 (E.D. Mich. June 9, 2022) (denying *Daubert* motion to exclude Hitt's testimony on similar subject matters).

H. DEFENDANTS' CRITIQUES OF STOCKTON'S DECLARATION AND REPORT

As noted, Stockton has offered two damages models: (1) an Overpayment model, which calculates the amount of overpayment at the point of sale for the Trucks with excessive emissions; and (2) an Excess Fuel Consumption model to calculate the increased costs passed along to the consumer through purchasing more gas. Both models are premised on Plaintiffs' ability to prove the existence of the EEDs as described by Plaintiffs' engineering expert Smithers. And as previously noted, to the extent that Stockton's opinions are specifically based upon any of the EEDs being defeat devices under the fraud-on-the-regulators theory, those opinions are inadmissible and are not further addressed.

i. Challenges to Stockton's lack of supply and demand analysis

Through Defendants' Expert Hitt, Defendants argue that Stockton's models should be excluded because they do not consider supply and demand factors in a "but-for world" where "the EED was absent or had been disclosed." Defendants' Memorandum in Support of Their Motion to Strike and Exclude the Declaration and Opinions of Plaintiffs' Expert Edward Stockton, ECF No. 194, PageID.24600; Hitt's Merits Report, ECF No. 217-6, PageID.27132. Specifically, Stockton's analysis does not account for actual or but-for prices or quantities, and whether disclosure of any vehicle feature or attribute "would have changed prices paid in the but-for world." *Id.* at PageID.24600–01. Defendants argue that Stockton's models therefore cannot determine whether Plaintiffs overpaid for the Trucks. *Id.* at PageID.26402.

Defendants contend that Stockton was required to use a different model using "an economic analysis comparing (1) the market prices Plaintiffs actually paid with (2) the prices they would have paid in a but-for world in which the EED was absent or had been disclosed." *Id.* at PageID.24600. Defendants cite cases supporting their argument that such a comparison requires assessing market prices and the supply and demand factors that determine market prices. *Id.* at PageID.24600 n.5, PageID.24601 nn.6–7.

Defendants argue that without adequately considering these supply and demand issues, Stockton improperly uses a "substitute" measure of overpayment—the $995 figure associated with the ultra-clean diesel system ("UCD System") "that was listed on the Monroney labels for some, but not all, of the subject vehicles." *Id.* at PageID.24602. Defendants claim that "Stockton presents no evidence that the $995 affected demand, even for the subset of subject vehicles that had that figure on their Monroney labels." *Id.* at PageID.24603. Defendants emphasize that "for information to affect consumer demand, consumers must be aware of it." *Id.* Defendants point out that Plaintiffs Forshaw, Perdue, and Chouffet admitted that the $995 on their Trucks' Monroney labels did not influence their purchase decisions or willingness to pay. *Id.*

In a declaration responding to Defendants' motion to exclude his report and declaration, Stockton explains that his analyses and models fully account for supply and demand factors. Declaration of Edward M. Stockton (Nov. 12, 2021), ECF No. 197-2, PageID.25045–46. Specifically, Stockton argues that the $995 price premium inherently considers supply and demand, because "[s]upply and demand factors necessarily affect [] costs." *Id.* at PageID.25046. Stockton also explains that he "directly consider[s] the impact of supply and demand factors" through the rebates on net prices paid by dealerships "and margins captured by dealerships in retail sales to end-users." *Id.* at PageID.25045. Furthermore, Stockton

clarifies that "[s]upply and demand factors directly affect observed market outputs, given that the vehicles have already been sold." *Id.*

The Court finds that Defendants' critiques on the adequacy of Stockton's supply and demand analysis may affect the weight that the jury should give to his opinions, but not admissibility. Stockton's assumptions with respect to supply and demand, which Defendants dispute, are reasonable and substantiated by the record and basic economic principles. Defendants' arguments on this point are relevant, but they must ultimately be assessed by the jury. The Court will not exclude Stockton's opinions on these grounds. *See In re Cardizem CD Antitrust Litig.*, 200 F.R.D. 297, 325 (E.D. Mich. 2001) (explaining that courts "routinely reject" arguments challenging the merits of an expert's conclusions); *see also Cason-Merenda v. Detroit Med. Ctr.*, 862 F. Supp. 2d 603, 646 n.43 (E.D. Mich. 2012) (noting that competing damages models represented a "battle of the experts" that the jury must resolve). Thus, Defendants' criticisms provide a fertile area for cross-examination, but not exclusion. *See Daubert*, 509 U.S. at 595.

ii. Challenges to Stockton's lack of analysis of customers' willingness to pay in a but-for world

Defendants assert that Stockton's overpayment analysis is irrelevant because Stockton did not consider what price putative class members would be willing to pay in a but-for world where the EEDs were disclosed. ECF No. 194, PageID.24600–02. Based on Defendants' Expert Hitt's analysis, Defendants argue that to be valid, Stockton's opinions must be premised

upon the following: the $995 was on the Monroney label of the purchaser's Truck; the purchaser saw the $995; and the $995 on the label affected that purchaser's decision to buy or the amount that they paid. ECF No. 194, PageID.24602–03; ECF No. 217-6, PageID.27138–40. Defendants contend that Stockton's report is based only on the cost charged to consumers for the clean diesel attribute that consumers necessarily paid, but does not account for the price consumers would have paid with a disclosure of the EEDs. *Id.* at PageID.24602.

Stockton responds that it is more appropriate to use standardized measures of market value to assess the price premium (i.e., the $995 associated with the clean diesel premium), rather than the "idiosyncratic transactional behaviors" of individual consumers. ECF No. 197-2, PageID.25040. The question, according to Stockton, is "would an informed market increase the prevailing price to account for a feature that did not provide incremental value?" *Id.* In that respect, Stockton explains that whether the consumers saw the Monroney label is irrelevant to his analysis. *Id.* Stockton clarifies that the alleged overpayment is rooted in assessing "whether a feature whose positive attributes are fully negated would add to the market price among informed participants." *Id.* Assuming an "informed market," consumers would not be willing to pay more for a feature that does not add incremental positive value. ECF No. 217-2, PageID.26513.

Stockton also emphasizes that his Overpayment model calculates the actual cost customers paid for the UCD System, based on FCA's own data. Declaration of Edward M. Stockton in Support of Plaintiffs' Motion for Class Certification, ECF No. 217-3, PageID.26848. Stockton recognizes that "[u]ndisclosed elements of a transaction may adhere to the consumer in harmful ways." *Id.* at PageID.26820. Stockton contends that his Overpayment model accounts for how "consumers can also assume at the point of purchase reasonably foreseeable costs or other harm as a consequence of" undisclosed product features. *Id.* Stockton acknowledges that willingness to pay is one model of economic harm, but concludes that his approach of "evaluat[ing] economic harm from overpayment at the point of acquisition" is most appropriate here, where consumers bought vehicles with an undisclosed defect that affected performance. *Id*; *see also* ECF No. 217-2, PageID.26520.

Despite Defendants' arguments to the contrary, the Court finds that Stockton's Overpayment model provides useful evidence for the factfinder, even if Stockton did not incorporate willingness to pay. As Stockton explains, his approach intentionally avoids evaluating what individual customers saw or relied upon because his model uses the price that FCA assigned to the UCD System as the starting point. Furthermore, Stockton explains how this cost is already present and accounted for in the vehicle price, regardless of what any individual purchaser saw. Defendants can

raise their careful critiques of this approach through cross-examination, but the Court will not exclude Stockton's opinions on these grounds.

iii. Challenges to Stockton's lack of consideration for putative class customer preferences and Truck features

Defendants broadly assert that "diesel trucks are highly differentiated products with different options and features that are purchased by consumers with different preferences," such that the willingness to pay varies by customer. ECF No. 194, PageID.24604. But this argument inaccurately assumes that the UCD System was optional when it was not, having been built into every Truck in the putative class period and without giving consumers the ability to accept or reject the feature.

In general, Stockton calculated the increase in costs to consumers associated with this UCD System. Because FCA did not sell the Trucks directly to customers, but to dealerships that then resold the Trucks to consumers, the UCD price premium is initially paid for by the dealership. ECF No. 197-2, PageID.25038–39. But because dealerships seek to maximize profit, it is rational to assume that all dealerships will recoup that cost by passing at least a portion of the expense to the customer. *Id.* Stockton thus explains that his Overpayment model is unaffected by "heterogeneity in transaction prices associated with different features, trimlines, and vehicle prices." *Id.* at PageID.25042. Defendants can further

explore their critiques of this issue on cross-examination, but the Court will not exclude Stockton's opinions on these grounds.

iv. Challenges to Stockton's use of the $995 figure on the Monroney labels and failure to disaggregate the NOx reduction feature

Based on Defendants' Expert Hitt's analyses, Defendants also fault Stockton for using $995 as a starting point figure for overpayment, with $995 being the price of the UCD System listed by FCA on the Monroney Labels of at least some of the Trucks. ECF No. 194, PageID.24602. Defendants point out that Stockton refers to $995 as an MSRP or list price, not a market price. *Id.* at PageID.24605. Defendants further state that construing $995 as a list price of the Trucks' UCD System is inaccurate because consumers did not have the option to purchase the same vehicle without the UCD System. *Id.* Defendants contend that featuring the $995 on the Monroney labels of some Trucks was intended to allow "dealers to justify the increase in MSRP over previous iterations of the product, and was not a representation of the economic value of the UCD System, much less of the economic value of the NOx reduction component of that system." *Id.* Furthermore, Defendants explain that the $995 "did not appear on the Monroney labels beginning in 2010," meaning putative class members who purchased their trucks after that point would not have seen the UCD System price at all. *Id.* at PageID.24603.

Defendants therefore posit that the "price" of the UCD System cannot be disaggregated or isolated from the total market price of the

Trucks. *Id.* at PageID.24606. Similarly, Defendants claim that they "explicitly" marketed other benefits of the UCD System unrelated to NOx reduction, including 350 horsepower and 605 foot-pounds of torque. *Id.* at PageID.24608. Thus, Defendants argue that Stockton's Overpayment model should be excluded because the $995 figure fails to capture the isolated value of reduced NOx emissions and is not limited to damages attributable to Plaintiffs' theories of liability or Defendants' conduct. *Id.* at PageID.26487.

Plaintiffs respond by pointing out that Stockton does not consider $995 to be a list price or MSRP. Rather, Stockton acknowledges that the $995 sticker price "is not necessarily the same as what the customer actually pays," such that the Overpayment model accounts for the transaction price being lower than the $995 starting point. Plaintiffs' Opposition to Motion to Strike Stockton, ECF No. 197, PageID.25011–12. Plaintiffs also object to Defendants' arguments that the UCD System includes features unrelated to reducing NOx emissions, such as horsepower and torque, because such benefits are not itemized on the Monroney label nor Defendants' internal documents. *Id.* at PageID.25025–06.

Moreover, Plaintiffs argue that Stockton's analyses are appropriate because they do not depend on idiosyncratic consumer perceptions of the value or distinction between features that reduce NOx emissions. *Id.* at PageID.25025. Instead, Stockton's models quantify the alleged overpayment for all putative class members based on their purchase of a

product at an increased price that failed to serve its purported function. *Id.*; *see also* ECF No. 217-3, PageID.26844–45.

Defendants' critiques on Stockton's use of the $995 figure and lack of NOx reduction feature disaggregation are insufficient to warrant striking Stockton's testimony. At bottom, Defendants' arguments focus on weaknesses in the factual bases for Stockton's analysis, which bear on weight not admissibility. *See McLean*, 224 F.3d at 800–01.

v. Challenges to Stockton's "discounting" of the $995 figure and variance in transaction prices

In a similar vein, Defendants contest Stockton's proposed method of "discounting" the $995 starting point price to reflect the lower price putative class members actually paid at the point of purchase. ECF No. 194, PageID.24609. Specifically, Defendants argue that Stockton improperly assumes that the "discount" on the $995 price for the UCD System "is proportional to the discount [the consumer] received on the vehicle overall." *Id.* at PageID.24610. Defendants also reiterate that transaction prices varied "even among identical vehicles" based on the differences in customized options, market conditions in different locations, and one-off bargains. *Id.*

Plaintiffs respond by clarifying that even assuming transaction prices varied, Stockton's discounting method is appropriate because the overpayment calculation "can apply to all pricing points" based on "a profit percentage, not a hard or specific figure." ECF No. 197,

PageID.25026. Although this does not directly rebut Defendants' contention that the "discount" on the $995 UCD System price may not be proportional to the overall vehicle discount—which Stockton does consider—the Court declines to strike Stockton's opinions on these grounds. Defendants can certainly explore on cross examination whether the factual bases for Stockton's models are appropriate based on the critiques raised here.

vi. Challenges to Stockton's methods on allocating damages across multiple owners of the same vehicle

Defendants also reject Stockton's approach to "allocat[ing] damages associated with a single vehicle among original and later purchasers based on the price that each owner paid." ECF No. 194, PageID.24610. Defendants claim that Stockton's model assumes "that the economic value of the NOx-reduction portion of the UCD System declines at exactly the same rate as the overall price of the vehicle." *Id.* Because Defendants maintain that is impossible to "isolate UCD System depreciation from overall depreciation," Defendants claim that Stockton fails to adequately support assumption that the UCD System depreciates proportionally and "in lockstep with" the value of the entire vehicle. *Id.* at PageID.24611.

In response, Plaintiffs claim that Defendants misstate Stockton's theory on depreciation because overpayment damages do not depend on whether the vehicle's UCD System depreciates at the same rate as the rest of the vehicle. Rather, Stockton's model incorporates "pro rata"

overpayment sharing, where each successive owner receives the portion of the vehicle's value that was consumed under their ownership. ECF No. 197, PageID.25023–24; *see also* ECF No. 197-2, PageID.25043.

Stockton clarifies that he did not purport to measure depreciation, but uses a shared overpayment method to "take into account the degree of each owner's participation in the Overpayment, using share of the vehicle's lifetime ownership as a proxy." ECF No. 217-3, PageID.25043–44. Plaintiffs argue that this shared Overpayment model "allows for the possibility that a first owner can recoup some of the original overpayment when they sell the vehicle to a second owner," without regard for depreciation. ECF No. 197. PageID.25024. The Court finds that Stockton's shared overpayment methodology is admissible, and Defendants' critiques are best addressed by cross-examination.

vii. Challenges to Stockton's Excess Fuel Consumption model

1. Stockton's lack of consideration for consumer expectations on fuel consumption

Defendants contend that Stockton's Excess Fuel Consumption model cannot establish the existence or amount of damages caused by excess fuel consumption because Stockton's analysis does not consider consumer expectations on fuel consumption. ECF No. 194, PageID.24613. Defendants criticize Stockton for relying on "the unsupported and implausible assumption that all 400,000-plus putative class members [must have] the same expectations about fuel consumption at the time of their purchases."

Id. at PageID.24614. According to Defendants, Stockton's assumption is contradicted by Plaintiffs' deposition testimony on their fuel consumption expectations, along with the notable variance in fuel economy among Plaintiffs' Trucks. *Id.* at PageID.24614 nn.22–23.

Plaintiffs first respond by emphasizing that "Stockton's opinion does not rest on consumer expectations, but instead quantifies the increased price associated with all purchasers of Class Vehicles." ECF No. 197, PageID.25028; *see also* ECF No. 197-2, PageID.25042–43. And in general, "customers do not have to have an expectation about fuel economy in order to have a preference for not paying more." ECF No. 197, PageID.25028. Stockton further clarifies that regardless of consumers' expectations on fuel economy, putative class members pay more for fuel "because of an undisclosed vehicle attribute." ECF No. 197-2, PageID.25042–43.

2. Stockton's Excess Fuel Consumption model's purported analytical flaws

Stockton's Excess Fuel Consumption model measures the difference in value between an emissions system that reduced fuel economy of the vehicles (by using EEDs that divert excess fuel), and an emissions system that functions properly. ECF No. 197, PageID.25029. As a starting point, Stockton's Excess Fuel Consumption model calculates expected fuel costs, which are then subtracted from actual fuel costs to quantify the fuel costs above what a consumer expects to get out of the vehicle. ECF No. 217-3, PageID.26849–50.

Defendants contend that Stockton's method is analytically flawed by relying on several improper assumptions. For example, Defendants criticize Stockton's reliance on the EPA's Fuel Economy Guide, where the Guide disclaims that its ratings may not accurately predict the miles per gallon. ECF No. 217-6, PageID.27151. Defendants also contend that in relying on Smithers' EED opinions, Stockton's excess fuel consumption model assumes that a "but-for" world in which the Trucks do not have an emissions system "is analytically incoherent, nonsensical, and inconsistent" with Plaintiffs' allegations. ECF No. 194, PageID.24615.

Stockton explains that his fuel cost methodology does not rely solely on the EPA's Fuel Economy Guide, but also a monthly fuel cost publication from the U.S. Energy Information Administration. ECF No. 217-2, PageID.26519. Plaintiffs further argue that the Excess Fuel Consumption model is entirely consistent with their allegations, which extensively detail how Defendants' Trucks allegedly consume more fuel during the active regeneration process. ECF No. 197, PageID.25016–17.

Moreover, Defendants misstate Stockton's "but-for" assumption as comparing Trucks "with and without [] entire emissions systems." ECF No. 194, PageID.24616. But Stockton plainly states that his "but-for" analysis considers vehicles with and without ***EEDs***—that is, devices that excessively increase emissions above what a reasonable consumer would expect. ECF No. 194-2, PageID.24631.

The Court finds that Defendants' objections to Stockton's Excess Fuel Consumption model go to weight, not admissibility. Stockton has thoroughly explained the bases upon which his opinions rest, which the Court accepts as reasonable, in designing this Excess Fuel Consumption model. Defendants may disagree with Stockton's methodology and the factual bases upon which his model rests, but they may explore those points on cross-examination.

viii. Challenges to Stockton's provision of windfall damages

Defendants contend that Stockton's models allocate damages to every putative class member regardless of whether they suffered injury, creating a windfall to some putative class members. ECF No. 194, PageID.24616–17. Defendants specifically note that putative class members "who were not willing to pay a dime for the UCD System, even if they negotiated away the entire $995 with their dealers at the time of purchase" would unfairly recover under Stockton's model. *Id.* Likewise, Stockton's models reward later purchasers who may not have overpaid like the initial purchasers, while also allowing putative class members who were not subject to any alleged misrepresentation to recover. *Id.* Defendants cite several cases for the proposition that models that award damages to all putative class members are inadmissible, insufficient to support class certification, or both. *Id.* at PageID.24617 n.27.

Plaintiffs respond by reiterating that Stockton's models "depend[] in no way on what customers saw or expected." ECF No. 197, PageID.25030.

Plaintiffs also point out that Defendants fail to identify any uninjured putative class members. *Id.* Furthermore, as discussed above, Stockton opines that the transaction price of the UCD System is necessarily included in the price of the Trucks, and does not disappear regardless of how putative class members bargained with individual dealers or the rebates they received.

Ultimately, Stockton has provided admissible measurements of class-wide damages. And in class actions, courts permit damages to be allocated after class certification. *See Counts*, 2022 WL 2078023 at *18 (E.D. Mich. June 9, 2022) ("[A]llocation of the per-vehicle overpayment among class members is a post-certification issue of claims administration."). Even where Defendants fault Stockton for failing to account for individualized differences in his models (among other concerns), that is insufficient to warrant exclusion. Stockton has provided two coherent and logical models to calculate damages on a class-wide basis.

An expert is permitted to make reasonable assumptions, which Stockton has done here. Stockton thoroughly describes his assumptions and has adequately explained the bases for them. Stockton's calculated damages are not speculative. He uses publicly available information and other reliable data to obtain the factors or inputs used in his two models, which he cites extensively throughout his declaration and merits report. Any difference in opinion about those assumptions should be resolved by a jury and is not a proper basis to strike his opinions.

I. RELEVANCE AND FIT OF STOCKTON'S OPINIONS

In addition to their specific critiques of Stockton's opinions and methodology, Defendants generally argue that Stockton's models "should be excluded because they are irrelevant to the claims actually at issue in this case." ECF No. 194, PageID.24598. Defendants claim that Plaintiffs have not "plead any theory of liability based on the presence of an EED in the subject vehicles," and Stockton's models do not relate to "representations or advertising." *Id.* at PageID.24597–98. Defendants further suggest that Stockton's models lack relevance to Plaintiffs' misrepresentation claims because Stockton's models "assume that a plaintiff can be damaged by a misrepresentation regardless" of what that person saw, heard, or relied on in making the purchase. *Id.* at PageID.24616.

However, as noted above, Stockton's model is designed to measure the amount of overpayment by putative class members due to the failure to deliver the advertised UCD System for which a premium was paid because of the EEDs. This is relevant to and fits with the allegations in Plaintiffs' SCAC and TCAC. *See, e.g.*, SCAC, ECF No. 62, PageID.8408–17, ¶¶ 124–48; TCAC, ECF No. 255, PageID.35061–66, ¶¶ 126–40 (alleging false promises and advertisements regarding clean diesel); ECF No. 62, PageID.8343–44, ¶ 18; ECF No. 255, PageID.34993–94, ¶ 18 (alleging that Plaintiffs did not get the Trucks with low emissions and high power that they bargained for based on Defendants' flawed designs); ECF No. 62,

PageID.8349, ¶ 30; ECF No. 255, PageID.34999, ¶ 30 (describing results of "real-world testing" that showed Defendants' failure to disclose excess emissions); ECF No. 62, PageID.8350, ¶ 32; ECF No. 255, PageID.35000, ¶ 32 (alleging that Plaintiffs would not have purchased, or would have paid less for the Trucks if Defendants had properly disclosed the excess emissions and lower fuel economy).

As detailed above, Stockton's damages models measure overpayment at point of sale and excess costs from decreased fuel economy. Plaintiffs have clearly alleged that they overpaid for both the Trucks and fuel based on their lack of awareness that Defendants' product generated higher emissions and, as a result, worse fuel economy. Stockton's damages models are germane to assessing the injury caused by these allegations and are admissible for that purpose.

IV. CONCLUSION

For the foregoing reasons, the Court:

1. **DENIES in its entirety** Defendants Cummins Inc. and FCA US LLC's motion to strike Plaintiffs' expert **Juston Smithers'** August 16, 2021 report and opinions on class certification (ECF No. 192);

2. **DENIES in its entirety** Defendants Cummins Inc. and FCA US LLC's motion to strike Plaintiffs' expert **Juston Smithers'** declaration of November 12, 2021 (ECF No. 203);

3. **DENIES in part and GRANTS in part** Defendants Cummins Inc. and FCA US LLC's motion to strike Plaintiffs' expert **Juston Smithers'** merits report and opinions of

December 16, 2021 (ECF No. 219). The motion is granted only with respect to Smithers' opinions as to defeat devices;

4. **DENIES in part and GRANTS in part** Defendants Cummins Inc. and FCA US LLC's motion to strike and exclude the declarations and opinions of Plaintiffs' expert **Edward Stockton** on class certification of August 16, 2021 (ECF No. 194). The motion is granted only with respect to Stockton's reliance on Smithers' opinions as to defeat devices; and

5. **DENIES in part and GRANTS in part** Defendants Cummins Inc. and FCA US LLC's motion to strike and exclude the merits report and opinions of Plaintiffs' expert **Edward Stockton** of December 16, 2021 (ECF No. 217). The motion is granted only with respect to Stockton's reliance on Smithers' opinions as to defeat devices.

IT IS SO ORDERED.

Dated: September 30, 2022

s/Terrence G. Berg
TERRENCE G. BERG
UNITED STATES DISTRICT JUDGE

Certificate of Service

I hereby certify that this Order was electronically filed, and the parties and/or counsel of record were served on September 30, 2022.

s/A. Chubb
Case Manager